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ABSTRACT

Research was conducted between 1996 and 1998 with the aim of developing a methodology for assessing and monitoring children's learning in developing countries. The study was framed by the multi-disciplinary theoretical framework of socio-cultural research, drawing specifically on the methodological orientation of action and intervention in research. In this case, 30 teachers each in Malawi and Sri Lanka took part in a system of activities in which they developed appropriate protocols for classroom-based assessment, designed and administered a variety of novel assessment tasks, collected evidence of children's work and discussed these collectively in groups, and recorded and profiled children's achievement in literacy and mathematics. Results indicated that in both countries teachers had reasonably good intuitive knowledge of students and learning but inadequate systems for collecting and interpreting evidence of achievement in literacy and mathematics. Once they were exposed to the intervention process of the research, it became clear that teachers, despite enormous resource constraints, were able to establish standards and norms based on their professional experiences, develop procedures for assessment, administer assessment tasks, and develop portfolios of evidence and assemble a profile of student achievements. Challenges to achieving this are not be underestimated and do vary between socio-cultural contexts. Four sets of profiles were developed in both English and the national languages of the countries. These were: (1) oracy profiles; (2) reading profiles; (3) writing profiles; and (4) mathematical profiles. The study concludes that the activity-based intervention is a useful approach to developing insights into learning, teaching , and monitoring educational quality. (Contains 44 references and 21 figures.) (Author/BT)

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THE QUALITY OF LEARNING AND TEACHING IN DEVELOPING COUNTRIES: ASSESSING LITERACY AND NUMERACY IN MALAWI AND SRI LANKA

SO 034 100

David Johnson, John Hayter & Patricia Broadfoot

Serial No. 41

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Department For International Development

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Abstract

1. The research was carried out between 1996 and 1998 with the aim of developing a methodology for assessing and monitoring children's learning in developing countries.

2. The study was framed by the multi-disciplinary theoretical framework of socio-cultural research, and drew specifically on the methodological orientation of 'action' and 'intervention' in research.

3. In this case, 30 teachers in each country (Malawi and Sri Lanka) took part in a 'system of activities' in which they developed appropriate protocols for classroom-based assessment, designed and administered a variety of novel assessment tasks, collected evidence of children's work and discussed these collectively in groups, and recorded and profiled children's achievements in Mathematics and literacy.

4. The study found that in both countries teachers had reasonably good intuitive knowledge of learners and learning, but inadequate systems for collecting and interpreting evidence of achievement in literacy and Mathematics.

5. Once they were exposed to the 'intervention' process of the research, it became clear that teachers, despite enormous resource constraints, were able to establish standards and norms based on their professional experiences, develop procedures for assessment, administer assessment tasks and put together portfolios of evidence and assemble a profile of learner achievements.

6. The challenges to achieving this should not be under-estimated and do, of course, vary between socio-cultural contexts.

7. Four sets of profiles were developed in both English and the national languages of the different countries. These were:

Oracy profiles	(English and Chichewa in Malawi; English, Sinhala and Tamil in Sri Lanka)
Reading profiles	(*as above*)
Writing profiles	(*as above*)
Mathematics profiles	(Pupils in Malawi were assessed in English and in Sri Lanka they were assessed in Sinhala and Tamil)

8. In Malawi, the oracy profiles show that 27% of children achieve the level expected by their teachers in English and 40.7% achieve the expected level in Chichewa.

9. In Sri Lanka, 20.3% of children achieved the expected level in English, 20% did so in Tamil and 20.7% in Sinhala.

10. The assessment of reading in Malawi shows that 32.4% of children achieved the expected level of reading texts in English and 34.4% in the reading of texts in Chichewa.

11. In Sri Lanka, the teacher-based expectation that at least 50% of children would achieve a level 3 in the reading of English, Sinhala and Tamil texts was not borne out.

12. The writing profiles of children in Malawi are strong, with 40.5% achieving a level 3 in English and 42.8% in Chichewa.

13. By contrast, the writing profiles in Sri Lanka were weak in English. Only 2.5% of children achieved a level 3, but this was unsurprising as the pattern of teaching English is, in the first instance, to develop the communicative competencies in speaking and reading.

14. However, the profiles for writing in Sinhala and Tamil were more encouraging, though falling below teacher expectations (only 39% achieved a level 3 in Sinhala and 38.7% in Tamil).

15. The Mathematics profile, in both countries, shows that under 40% of learners achieve a level 3. In general, learners, in both countries, showed a high level of success in computational problems in which 'rules' were used, but were less successful in word-based problem-solving, diagnosis and measurement.

16. The study concludes that the 'activity-based intervention' methodology is a useful approach to developing insights into learning and teaching, and for monitoring education quality.

Chapter 1 - Introduction

Rationale for the study

There is a paucity of research into children's learning in developing countries. The studies which do exist, mostly describe the quality of an educational system, or part of the system, in terms of 'input' into the teaching process (teachers, equipment, materials, etc.) or look at student achievement in relation to these inputs (Jansen, 1995; Lockheed and Verspoor, 1991). Such studies are often conducted outside the real context of the classroom and are largely summative. There is very little research which uses 'insider perspectives' (Prophet & Rowell, 1990; Sato, 1990) of what happens in schools and classrooms, nor are there many studies which have adopted approaches which were able to monitor standards over time.

Moreover, although teachers are the most natural 'insiders' and indeed carry out assessments into children's learning, the methods of assessment, recording and interpreting learning outcomes they currently use rarely provide adequate information upon which to make judgements about the quality of education. It was to address these two needs that this study into the quality of learning and teaching in two developing countries was undertaken.

Aims of the Study

The main aim of the study was to develop a framework in which the achievements of primary aged children in Malawi and Sri Lanka in Literacy and Mathematics could be described. This objective was to be achieved through a methodology which involved developing appropriate protocols for classroom-based assessments, collecting evidence of children's work, and recording their achievements in terms of literacy and numeracy 'profiles'.

The specific aims of the study were

i. to develop a profiling system capable of providing reliable and valid indicators of children's learning at particular stages of primary schooling
ii. to enhance the capacity of teachers to collect information about children's learning and to keep records of their achievements.

Method and implementation

The research fell broadly within the tradition of developmental and 'interventionist' approaches encouraged by socio-cultural and activity theorists (Cole 1995;1998; Wertsch et al 1995). The methodological approach adopted was based on the belief that socio-cultural studies should be involved in changing, and not just examining, human action and the cultural, institutional and historical settings in which it occurs (Wertsch, del Rio and Alvarez 1995:29).

Thus, the research approach adopted in this study set out to bring about changes to learning and teaching through encouraging teacher and pupil activity. The ultimate gaol was to achieve 'sustainable new systems of activity in existing institutions', (Cole 1995:199)

There were five broad stages of the research process. 30 teachers in each country were involved in:

i. Reviewing the learning requirements as stated in curricula, syllabi, and textbooks in each country for particular stages of primary schooling;
ii. Establishing standards and norms based on their professional experiences and an emerging literature on learning;
iii. Developing procedures for assessment;
iv. Administering assessment tasks, collecting evidence of children's achievements and recording outcomes;
v. Developing profiles of children's achievements

The stages are described in more detail in chapter 4.

Chapter 2 - The Quality of Education in Developing Countries - a review of the literature

Introduction

'Education Quality' as a concept has always been difficult to define. Most public debates on the quality of education include concerns about a student's level of achievement, the relevance of learning to the world of employment or the social, cultural and political worlds occupied by the student. Frequently they often also include concerns about the conditions of learning, such as supply of teachers or facilities.

In the light of this, researchers have suggested that the concept of educational quality is complex and multidimensional (Grisay & Mahlck, 1991; Hawes & Stephens, 1990). Grisay and Mahlck (1991) argue that the notion of quality should not be limited to student results alone but should also take into account the determinant factors which influence these, such as the provision of teachers, buildings, equipment, curriculum and so on. As such, the general concept of quality of education is made up of three interrelated dimensions. These are: the quality of human and material resources available for teaching (inputs), the quality of teaching practices (process) and the quality of results (outputs and outcomes).

Thus, studies which set out to assess the quality of education need to be treated carefully. Some studies which purport to assess the quality of education are in fact simple measures of input to education (teachers, equipment, materials, etc.) Many of these studies are problematic because they focus on **formal** rather than **actual** quality characteristics. For example, one school might have a larger number of highly qualified teachers than another, but they may be less motivated. Similarly, one school might have fewer facilities than another, but use them more efficiently (Carron & Ta Ngoc, 1981).

Another set of studies are those which use indicators such as repetition rates and drop-out rates as proxy measures of educational quality. The attractiveness of such studies is the availability of data, often contained in educational statistics collected through Educational Management Information Systems in most developing countries. According to Lockheed and Hanushek (1987), these data are useful for making aggregate comparisons between regions of a country, and between countries, but are less relevant for analysing differences in performance between schools and between children in the same grade. They are even less useful for explaining such differences (Alexander et al, 1999).

Many studies do collect data on student achievement. However, most such data are based on standard achievement tests and tend to focus on the acquisition of traditional knowledge and skills. According to Ross and Mahlck (1990), the attainment of more complex educational objectives, such as 'individuals capable of working in co-operation with others' or 'demonstrating ability to solve problems' are rarely evaluated. Indeed, looking at student outcomes alone does not tell us how schools operate. A school whose students achieve a higher score than those of another is not necessarily a better school. Higher scores may be explained by 'out of school' factors such as the fact that students enter school with higher academic abilities . In other words, a school's 'effectiveness' should be judged by its contribution to a students achievement independent of the student's home background. In this sense, it is the 'value added' by the school to the student's literacy, academic and social skills (Grisay and Mahlck 1991) which should determine its standing

Research Paradigms: School Effectiveness, School Improvement and Improving Educational Quality

From the discussion above it is clear that there are potentially many different approaches to the study of educational quality. According to Grisay and Mahlck 1991, three principal research paradigms can be discerned from the literature. These are:

i. Experimental studies which measure the effect of an innovation, such as the introduction of a new curriculum or new teaching method, on the educational system. Included in this research paradigm are overviews, or meta-analyses, which re-analyse the size of the effects of a specific factor, for example the use of textbooks, on educational outcomes.

ii. Large Scale, 'input-output' research, which sets achievement against natural variations in input. Non-school features of the input (age, IQ, home background, etc.,) are statistically controlled in order to identify the educational variables associated with better achievement.

iii. Qualitative studies on school improvement, the so-called second generation school effectiveness studies (Riddell 1996) which rely on techniques of observation and case studies. These studies differ from first generation school effectiveness research in that they place less emphasis on the identification of input variables that can be altered separately (supplying more textbooks, increasing the numbers of teachers, improving their training) and focus rather on process variables and systemic factors (school climate, nature of leadership, style of management, teaching practices etc.).

In developing countries, there have traditionally been far fewer examples of experimental research than in more industrialised countries. However, there are increasing examples of quasi experimental studies, mainly those carried out as rigorous evaluations of substantial educational innovations. Currently, the World Bank is carrying out a number of such evaluation studies in developing countries based on the use of randomised control groups (Newman et al, 1997).

The most common research tradition in developing countries is still that of the input-output survey. However, there is increasing criticism of the value of these studies in determining the quality of education in developing countries.

Jansen (1995) has reviewed the field of School Effectiveness research in developing countries and concluded that it does not address the central question necessary for the development of educational quality in the developing world. He argued that school effectiveness research 'has reached a 'cul-de-sac in the 1990s'.

Jansen is concerned by the fact that most School Effectiveness research in developing countries continues to suffer from the criticisms levelled against 'first generation' studies of this kind, ranging from methodological critiques (Purkey & Smith, 1983) to 'insensitive cultural transfer' (Fuller & Clarke, 1993).

The main methodological criticisms include, sample bias, narrowly focused outcome measures, lack of control for background characteristics, single level analysis of effects and so on. The trans-national character of school effectiveness research has also attracted a lot of criticism 'insensitive transferral of methodologies from industrialised countries to developing country contexts.

While Fuller and Clarke (1993) argue for a more 'culturally situated model of school effectiveness' (p.119), Jansen points to the growing dissatisfaction with the effectiveness paradigm and calls instead for a research paradigm which focuses on **quality** rather than **effectiveness**. He suggests that 'studies of effectiveness and studies of quality represent competing and incompatible agendas for school and classroom-based research' and makes a distinction between a 'school effectiveness' and a 'school quality' approach. He suggests that education quality is 'concerned with processes of teaching , learning, testing, managing and resourcing which must be investigated on their own terms', i.e., through in-depth qualitative investigations of such processes and draw on more insider perspectives of what happens inside schools and classrooms. Thus, unlike Fuller and Clarke who argue that school effectiveness research should be broadened and 'culturally situated', Jansen dismisses the approach as being incompatible with assessing quality. He captures the differences between the two approaches as follows

Figure 1 - Differences between school effectiveness and school quality approaches

School Effectiveness	School Quality
Origins in economics, using the production function model	Influenced in part by anthropology, descriptive procedures
Studies the effects of a set of inputs (e.g. textbooks) on a specified output (e.g. student achievement)	Studies school and classroom level processes and their interactions, and the impact on achievement
Utilises large-scale statistical methods, e.g. multiple regression models to 'determine' the relative effects of different inputs on achievement	Uses ethnographic instruments adapted for particular contexts e.g., interviews, observation schedules, questionnaires etc.
Results are often aggregated for a large number of schools offering generalisations across contexts	Results often specific for particular schools or classrooms, though generalisations are also sought across schools and classrooms

From Jansen 1995: 194

Riddell (1996) who also reviews the value of school effectiveness research in developing countries is however much more optimistic about the future of the research paradigm in this context. She argues that the promise of a 'third wave' of school effectiveness research in developing countries is in danger of being lost without being fully understood or explored. Riddell points to 'a trickle' of research which has utilised multilevel analysis as a method, but adds that these studies have never really taken root.

Riddell feels strongly that school effectiveness research has not been given an adequate chance in developing countries and that it is in danger of dying an 'untimely death'. Most critics, Riddell argues, are calling for a return to 'second wave' classroom-based observational studies.

To this end she is critical of the stance adopted by Jansen in relation to research methodologies. She accuses him of playing quantitative and qualitative methodologies against each other and questions his belief that qualitative approaches are necessarily better for policy interventions than quantitative approaches (see Johnson, 1995).

Riddell argues that the so-called 'second wave' of school effectiveness research, which places emphasis on process variables, has been overlooked in developing countries although it has had marked success in industrialised countries. As such, she proposes that the third wave of school effectiveness research (multi-level modelling) offers a way in which the false dichotomy between quantitative and qualitative approaches can be bridged and that 'multi-level analysis is capable of doing what Jansen suggests we should be moving towards, i.e., the possibility of delineating complicated networks of cross-level relationships within classes, within schools and contextualising the different multi-cultural backgrounds in evidence'.

The separation of qualitative and quantitative approaches in studying quality is a problem. Indeed, any research which sets out to fly a particular methodological flag regardless of the specific research questions being addressed is missing the point. The search for suitable methodologies to assess quality is an important consideration of the present study. It is thus useful to review a small selection of studies on educational quality in developing countries , which span the continuum from quantitative input-output studies to more qualitative, case study approaches.

Case studies of school effectiveness, school improvement and educational quality

1. IIEP Primary School Quality Study

This national study of primary education in Zimbabwe was carried out in 1980. The aim of the research was to produce a list of the most effective schools in Zimbabwe and target these for further study. The study was conducted by the International Institute of Education Planning (IIEP) as part of an in-country training exercise in the development of research skills (Ross & Postlethwaite, 1992). According to the report, the study was concerned with the level and distribution of inputs to schools which were considered by the Ministry of Education and Culture to be central to the provision of basic education. Thus data were collected on school buildings, teachers and their living conditions, and resources in schools and classrooms. The study was also interested in measuring student outcomes and a reading test was designed as an outcome variable.

The sampling strategy ensured a representation of urban and rural schools, government and non-government schools stratified by region. One hundred and fifty schools were selected on this basis. To administer the reading test, 20 pupils from grade 6 classes were chosen randomly from each of the 150 schools.

Schools were ranked according to average reading attainment scores as well as the average socio-economic level of the school (these indicators were derived from a questionnaire completed by the 6th grade students and based on seven possessions at home). After controlling for student economic status, school averages of the residual scores were computed in order to rank them from 'the most effective to the least effective'.

Many criticisms of the IIEP study have been made, most notably from Riddell (1997) who points out that the study ignores several elements of good research design for school effectiveness studies. Perhaps the two most important omissions of the IIEP study are, first, the failure to employ a multi-level analysis of the data rather than the single level analysis performed, and second, as argued by Riddell, the problem of constructing valid and reliable baseline measures of student level intake.

2. Namibian National Learner Baseline Assessment

The Namibian National Baseline Assessment was conducted in 1992 to answer the question 'how much do Namibian children learn in schools?' (Namibian Ministry of Education and Culture, 1994). The purpose was to collect information about the English and Mathematics proficiencies of students. A nationally representative sample of 136 primary schools was selected. One grade 4 class and one Grade 7 class were randomly selected from the 136 schools and all the pupils in these classes were given criterion-referenced tests in English and Mathematics. The only other information gathered was the age, sex and home language of the pupils surveyed.

The baseline study provided information of student learning beyond that which teachers already had provided information about in schools which allowed their comparison to others in English and Mathematics proficiencies. The study also suffered methodological problems including a lack of school-level intake measures.

The two studies described above, according to Riddell (1996), fit the model of school effectiveness study, which Cuttance (cited in Riddell, 1996) describe as the 'Standards Model'. The Standards Model is simply a league table which compares the average performance of pupils in a given school with the average performance of pupils across all schools. By way of contrast, the second and third models outline by Cuttance, the so-called 'School-level Intake Adjusted Models' and 'Pupil-level Intake Adjusted Models' could have been achieved in the IIEP study if school achievement (derived from the reading test scores) had been subjected to a regression analysis in relation to the school-level socio-economic data. The residuals would have constituted a 'school-level intake adjusted measure' (see Riddell 1996:12).

3. The Botswana Junior School Study

The Botswana Junior school study was carried out by Fuller, Hua and Snyder. It was aimed primarily at establishing the extent to which the achievement of girls is affected by particular classroom practice. This study represents a combination of qualitative methodologies based on extensive classroom observations of 214 teachers in 31 junior-secondary schools and outcome measures derived from achievement tests in English and Mathematics administered to the same students on two occasions, the second occasion occurring a year after the first. To its advantage, the study has a pupil level intake measure. Four sets of variables were used: material conditions and classroom inputs; teacher characteristics and training; teachers pedagogical beliefs and efficacy; and teaching practices and classroom rules. According to Riddell (1996), the study represents one of a small number of sophisticated school effectiveness designs in the third world.

Although, the results of the study are disappointing - it would appear that teachers asking 'open-ended questions' reduced the gains in maths scores for girls - the study did however raise important questions about the cultural relevance of certain pedagogical practices deemed to be 'effective' in the context of industrialised countries.

4. World Bank Project Designs and the Quality of Education in Sub-Saharan Africa

The study carried out by Heneveld and Craig (1996) abandoned quantitative approaches to school effectiveness research for a qualitative approach to monitoring effective schools. Heneveld and Craig took as given the different sets of factors related to school effectiveness which had arisen in various studies, including, Dalin (1994), Fuller (1987), and Schreens and Creemers (1989). Based on these factors, the authors developed a conceptual framework based on 18 key factors that influence student outcomes. The factors were divided into four categories - supporting inputs from outside the school and enabling conditions, i.e., school climate and the teaching and learning process inside the school.

A sample of World Bank projects was selected on the basis of the degree of attention paid to the characteristics of school effectiveness identified in this conceptual framework. Twenty-six country projects were eventually identified and appraised in this respect.

Riddell (1996) remarks that the Heneveld and Craig study is different to that of the Botswana Junior School Study which queried, rather than accepted, the relevance of school effectiveness factors in developing countries. She also remarks that the study does not look directly at student achievement but concedes that Heneveld and Craig stated that they had no intention of doing so. Rather the intention of their framework seeks to assess the presence and dynamics of conditions that have been identified as conducive to effective education. Riddell (1997) is adamant however, that the conceptual framework leaves itself open to misuse by those 'unschooled in its dangers' and argues that ranking schools using Heneveld's descriptors to monitor educational quality based on 'conducive conditions' is entirely different from ranking effective schools based on the relationship of such conditions to pupil outcome (1997: 195).

5. How schools Improve

Dalin's (1994) study of 'How schools improve' is a qualitative study carried out in Bangladesh, Columbia and Ethiopia. In-depth studies were made of 31 rural primary schools. On the basis of the following indicators: 'degree of implementation of key aspects of the reform; degree of impact on the students, teachers and the school as an organisation; and the degree of institutionalisation of the reform or the 'routinisation' of practices'. Schools were sorted into three categories (excellent, very good and good schools).

The study sets out to account for educational change in a much broader sense than student outcomes in the quantitative research tradition. Also, the study gave credence to a wide range of perspectives of change. For example it contrasted the perspectives of key informants with those of local informants.

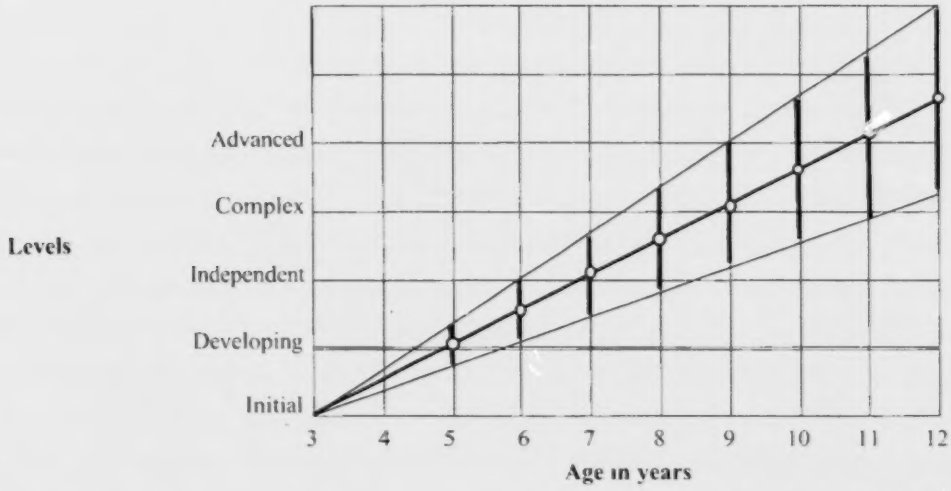
The study is an important addition to a relatively limited number of qualitative studies of educational quality. The focus is on accounting for educational change and its strength is the importance given to different perspectives on the change process.

6. Profiles of Learning in South Africa

A study carried out by Johnson (1998) sought to develop a framework in which education quality could be assessed through the use of 'insider perspectives' (Little, 1995). Working with South African primary school teachers, the researcher developed a set of indicators of achievement for literacy and numeracy within five broad levels of progression: initial, developing, independent, complex and advanced. These levels are meant to be reflective of increasing competence and when they are related to children's age, the resultant matrix essentially constitutes a 'growth model' (Rowe and Hill, 1996) which projects a child's developing levels of performance.

An illustration of the levels of achievement is provided in figure 2 below. According to the matrix, the average seven year old child for example, could be considered to be working within the 'independent' level. The 'O' indicates the average or median while the 'whiskers' indicate the range. Thus some seven year old children may still be achieving within the 'developing' level while other may be progressing towards the 'complex' level.

Figure 2 - The Profiles of Learning Framework



From Johnson, 1988: 388

This approach to assessing educational quality through a developmental or growth framework is summed up by Masters (1994) as one which:

> "seeks to provide a more explicit identification of outcomes and a framework against which ... the progress of an individual, a school, or an entire education system can be mapped and followed. But this approach is built not around a notion of an outcomes check list, but around the concept of *growth* ... Student progress is conceptualised and measured on a growth continuum, not, as the achievement of another outcome, on a check list" (Masters, 1994: 9, cited in Rowe and Hill, 1996: 315).

Johnson (1998) shows how teachers, on the basis of evidence assembled through portfolios, profiled the learning achievements of their students. The difficulty with the study is that it was not able to calculate the achievements of all learners. Rather, it demonstrated, through case studies, what selected children were able to achieve. These data are thus indicators of learning achievement of children in different age categories, but not overall scores.

The six studies reviewed above are examples of approaches to assessing educational quality from a range of methodological perspectives. The IIEP study in Zimbabwe, and the Botswana Junior School study are both examples of input-output research. Student achievement is of concern only in relation to the inputs provided. Heneveld and Craig's study and that of Dalin both adopt qualitative methodologies. In the case of Heneveld and Craig, they review World Bank projects in relation to effectiveness indicators derived from the existing School Effectiveness Literature. Dalin adopts a case study approach and is interested in processes. Johnson's study in South Africa is an example of a study which draws more substantially on insider perspectives. Although limited in its methodology to provide overall scores of achievement, it is distinguished by being part of a tradition of developmental and interventionist research which seeks to set up activities designed not only to **understand** the underpinning factors which promote quality in an education system but also to **enhance** it.

It is on this latter, more interventionist approach, that the present study is based. A central concern is the development of a profiling system in which student progress can be monitored. However, underpinning this aspiration to develop more meaningful and manageable systems for recording student progress, is the increasingly powerful message now emerging from the literature concerning the capacity of assessment to be, in itself, a mechanism for enhancing quality. As Black and William (1998) have shown, the sensitive use of formative assessment in the classroom can lead to a significant rise in the overall level of achievement of the class. The effective communication of learning goals to students, regular monitoring of learning progress and feedback to students that helps them understand how to improve, are key elements on this respect. Thus an exploration of teacher's current practice in

this respect in the countries studied, and how good practice could be developed and encouraged, was another central concern of the Assessing the Quality of Learning and Teaching in Developing Countries Project.

This objective was felt to be particularly important in an international context in which concern with the **measurement** of quality, not nationally and comparatively, seems in danger of eclipsing the arguably more important questions concerning how such quality can best be promoted at individual pupil and classroom level and hence ultimately the school and system level.

Another important feature of this study, therefore, was the aspiration to combine the insights into how best to both monitor and promote quality which the school effectiveness research tradition has generated, with those which have arisen from the more specific focus of assessment research concerning how it can best be used to support learning (Gipps, 1994).

Chapter 3 – Country Profiles

The research was carried out between 1996 and 1998. Two countries, Malawi and Sri Lanka were selected to participate in the study. The principle was to include one country in Africa and another in Asia in order to provide widely varying cultural contexts. Moreover, there are notable differences between the educational systems of these two countries, not least that Sri Lanka offers a reasonably established educational system while in Malawi, there has been considerable effort to 'renew' the education system.

Malawi

Malawi is a narrow, landlocked country in Southern Africa, bordered by Mozambique, Zambia and Tanzania. The country is divided into 3 administrative regions - North, Central and Southern - that reflect historical, socio-cultural and political differences. The country gained independence from British colonial rule in 1964, and the first multi-party elections held in 1994 saw an end to the one-party regime of Dr H K Banda.

Moleni (1999) conducted a study in Malawi and found that urbanisation is increasing rapidly, although over 85% of the population is still found in rural areas. The southern region consisting of Mulange, Blantyre and Zomba is the most densely populated (UNIMA/SARDC 1997) The main urban centres in the South are the industrial capital of Blantyre-Limbe and the university town of Zomba. Infrastructure is poor, with few tarmac roads and limited access to public transport. Less than 1% of the rural population has electricity and access to clean water is problematic for both rural communities and urban townships.

The history of education in Malawi is interesting. Grant-Lewis et al (1990) claim that formal schooling was established by Christian missionaries based on their ambition to evangelise. In this respect, education for women was deemed to be unnecessary, since women could not become preachers (Grant-Lewis et al, 1990). The colonial government reinforced this and during much of Banda's regime, female participation in education remained severely restricted. This is reflected in an adult literacy rate today of less than 42% for women. (DFID 1998)

In 1994, following the democratic elections, the new ruling party, the United Democratic Front (UDF) stressed its commitment to education, regarding it as crucial to their central policy of Poverty Alleviation (MoE 1995). The new government quickly put in place a number of sector-wide educational reforms, most notably, the abolition of tuition fees and uniforms at primary schools. Expansion of secondary schooling rested on a programme to build mixed, day secondary schools and closer partnership with the private sector (Swainson et. al. 1998).

Tizora (1999) (cited in Moleni, 1999) claims that enrolment rose from 2 million to over 3 million following the introduction of free primary education in 1994, with a net primary enrolment of over 85%. Significantly, gender disparities in enrolments narrowed during the 1990's (Swainson 1998). In 1995/96 girls comprised 49% of new admissions in standard 1, although this percentage reduces as girls get older by the time they reach Standard 8, they make up 39% of the enrolment (MoE 1996). However, high net enrolment rates mask poor internal efficiency due to late entry, high drop-out rates and repetition for both sexes (Swainson et al 1998).

According to Moleni (1989), transition rates to secondary education have increased in recent years, but remain low at 9.3%. Following completion of the Primary School Leaving Certificate (PSLC), students may be selected, on the basis of their PSLC results, to subsidised government or grant-aided secondary schools. Grant-aided schools are generally well established boarding schools run by Church organisations and are often single-sex institutions.

For all intents and purposes, the education system in Malawi has undergone a transition, mainly in terms of quantitative expansion, but there appears to be a number of problems in relation to the improvement of educational quality.

According to Weber and Chibwana (1999), increased enrolment had resulted in higher pupil-teacher ratios – currently 70:1. Although the aim is to reduce this ratio in the long term, in the short term the government has adopted three measures. The first of these is a national teacher training effort aimed at training 20,000 new teachers. Second the conventional two-year residential teacher training programme has been replaced by a three-year programme in which trainees spend three months at the teachers' college and the rest of the time in school-based, supervised teaching placements. Third, the school day

is being altered to accommodate 'extended shifts' which allow for more and, presumably, smaller classes.

Large class sizes, resource shortages, and an inadequately trained teaching corps are seem to be associated with low achievement and wide-scale dissatisfaction with schooling (Johnson et al, 1992) and concomitantly low school completion rates. According to Weber and Chibwana (1999), only 23% of any given cohort completes eight years of primary school. Further, because of high repetition rates, it takes an average of 12 years to complete the eight-year primary school cycle (Ministry of Education and Culture, cited in Weber & Chibwana, 1999).

A number of innovative projects have been established to raise the quality of education, but have been mainly on inputs to education. The study reported here is an attempt to develop school and classroom based procedures to raise the quality of learning, teaching and assessment.

Sri Lanka

By contrast to Malawi, Sri Lankan achievements in education are quantitatively impressive. The GNP per capital in Sri Lanka is US$753 (World Bank, 1996), but its social indicators are typical of countries with much higher incomes. According to a country paper produced by DFID (1997), Sri Lanka has a literacy rate of over 90% and the highest basic and secondary education participation in South Asia. Over the past 50 years, the expansion in school enrolment has been remarkable. Participation in grades 1-5 is now close to universal, while the proportion of pupils still at school in year 11 is close to 70%. Girls have participated in this expansion to an even greater extent than boys and gender ratios range between 92 and 95 in grades 1-5. In higher grades, the gender ratio seems to climb steadily so that by year 11, when students sit the O level examination, there are as many as 115 girls for every 100 boys.

The increasing public demand for education has resulted in a network of accessible schools spread throughout the island. Pupils have access to a primary school within a radius of 2 km, a junior-secondary school within every 5 km and a senior-secondary school within a radius of 7-8 km (Hart & Yahampath, 1999).

According to the 1997 census, there are 10,120 schools in Sri Lanka comprising of four different types (see table 1). The student population is 124,108 with a total teacher population of 179,589.

1AB	1C	Type 2	Type 3	Total
515	1,777	3,877	3,951	10,120

Type 1AB Schools with Science classes
Type 1C Schools with Arts/Commerce classes
Type 2 Schools up to grade 11
Type 3 Schools up to grade 5

Schools are divided into Sinhala and Tamil medium, with the latter accounting for 3% of the total number of schools (see table 2 below).

Medium	1AB	1C	Type 2	Type 3	Total
Sinhala	828,206	1,097,280	915,716	314,705	3,155,907
Tamil	212,832	262,776	286,833	233,760	96,801

According to DFID (1997), the quality of education, particularly at the primary level appears to be declining. This is thought to be largely due to the recruitment from 1989 to 1995 of about 50,000 mostly untrained teachers. A number of researchers, including Karyawasam (1991), Nanayakkara (1992 and 1994) and Wijesuria (1994) (all cited in DFID, 1997) have carried out studies of primary school quality in Sri Lanka in recent years, and all have reported disturbing trends in levels of both maths and language achievement (DFID, 1997). Karyawasam, for example concludes:

"The actual performance is not up to standard even in the best schools in both mathematics and language in all the districts ... The performance of type 1C, 2 and 3 schools is shockingly poor, so as to warrant immediate remedial action (1991: 27) (cited in DFID, 1997).

There have been several innovations over the years to improve education quality (Little, 1991), starting with the introduction of an integrated curriculum in primary schools in 1972. Recently the government established a National Education Commission to study education standards and a Presidential Task Team has been formed to implement its recommendations.

Chapter 4 - Research Methodology

This chapter describes the process of implementing the research project. The following issues are discussed.

i. Setting up the research project
ii. The operational framework

Setting-up the research project

Establishing the project in Malawi and Sri Lanka

In Malawi, it was agreed that the Planning Section of the Ministry of Education be responsible for co-ordinating the Project and that the Centre for Educational Research and Training, based at Chancellor's College, Zomba should be responsible for providing local counter-part research staff to support the technical aspects of the project.

In Sri Lanka, it was thought appropriate for the research project to be based at the National Institute of Education. Counterpart research staff were provided by the Institute and given that it was necessary to work in three languages – English, Sinhala and Tamil, these counterpart researchers played a vital role in the technical aspects of the project with the teachers involved in the study.

Selection of the localities for the study

Decisions about selecting the locality for the study in each country were left largely to the local research partners but were guided by the following considerations.

That the district / area be roughly representative of the school population on a continuum representing on the one hand, highly under-privileged rural areas to well developed urban areas on the other (Govinda & Varghese, 1993: 19).

In Malawi, discussions were held with selected Regional and District Education Officers and a number of districts was visited. It was decided that the Lilongwe urban and rural districts should be selected as these would provide a sample of schools which was representative of all types of schools in Malawi.

In Sri Lanka it was important to ensure that the geographical area chosen for study was broadly representative of an ethnically heterogeneous population.

The Kurunegala District in the North Western Province was proposed as that most representative of schools in Sri Lanka. Another important consideration was its accessibility and the extent to which local education authorities would be willing to co-operate. The Provincial Director of Education in the North-western Province was active in selecting the schools and later became a central figure in the research process. A number of schools in the district were visited.

Selection of schools for the study

As with the selection of the localities for the study, the selection of schools was left to the local research partners. The following guide was established for selecting schools.

That the schools represented a reasonable variety in terms of size, and had varying levels of human and material resources and other conditions characterising the context of primary education in the country (Govinda & Varghese, 1993: 22).

Ten schools were selected in each country. In Malawi five schools were selected from the Lilongwe Urban District and five schools from the Lilongwe Rural District. In Sri Lanka, of the ten schools selected, these were broadly representative of the types of schools (1AB, 1C, 2 & 3) and included two Tamil schools.

Selection of teachers

Thirty teachers were selected to participate in the study in each country. Because of the differences in the 'cycle' of education and the organisation of schools in Malawi and Sri Lanka, the method of selection for teachers differed.

In Malawi, from the ten schools selected to participate in the study, teachers were chosen to represent each of the three sections of the primary school - the Infant section (Standard 1 and Standard 2), the Junior Primary section (Standards 3, 4 and 5) and the Senior Primary section (Standards 6, 7 and 8

In Sri Lanka, the pattern of school organisation is 5 years of primary education, 3 years of lower secondary, 3 years of secondary and 2 years of upper secondary. There is no division between primary and secondary schools and the majority of schools have both primary and secondary grades. Further, English is introduced as a subject for the first time in Year 3.

It was decided to select only year 4 teachers. Thus, in each of the ten participating schools, two year four classroom teachers were selected. Further, the English teacher in each of the ten schools was selected.

The operational framework

The research was organised around the stages described in the operational framework outlined in chapter 1. To recap, the research was organised in five broad phases. These are:

i. Reviewing the learning requirements as stated in curricula, syllabi, and textbooks in each country
ii. Establishing standards and norms based on the professional experiences of teachers and an emerging literature on learning
iii. Developing procedures for assessment
iv. Administering assessment tasks, collecting evidence of children's achievements and recording outcomes
v. Developing profiles of children's achievements

These phases are described in more detail here.

1. Reviewing learning and teaching

The first phase of the research was to review the processes of teaching and learning in Malawi and Sri Lanka and principally, the expectations embedded in both systems as to what constituted 'successful learning'. In other words, we needed to understand what the requirements of Primary Schooling were - and what learners were expected to achieve at different stages. Thus the Primary School Teaching Syllabuses for English, Chichewa and Mathematics for Standards 1 to 8 were reviewed in Malawi. These syllabuses were examined in terms of their subject objectives. In addition textbooks in use in Malawi primary schools in English Chichewa and Mathematics were collected and the range of activities examined.

Similarly, the syllabi for Year 4 in English and Mathematics were reviewed in Sri Lanka. At the time of the study, Sri Lanka had begun work on developing an *Essential Learning Continuum* (a criterion-referenced framework for the assessment of learning).

From these documents, an impression was gained of the demands the curricula made on students. The question that arose for both countries was whether the demands of the curricula were unrealistic in their expectations of student's achievements. This assumption needed to be tested.

The processes of teaching were also scrutinised carefully. The teachers selected for the study were treated as focus groups and discussions about their professional practice offered useful insights into how learning was perceived and supported. A selected number of classroom observations were also carried out in particular to review the context in which Literacy and Mathematics were taught and learned.

In sum, the findings from these reviews were:

i. expectations of learning embedded in curriculum material, syllabi and textbooks were in the words of teachers 'ambitious', 'unrealistic', and 'unclear'.
ii. The measures (tests and examinations) used to assess learning outcomes were 'too narrow' and 'incapable of determining what learners know or can do'.
iii. Approaches to supporting learning(teaching) were limited, mainly due to the lack of resources and the quality of teacher training and dated classroom methodologies.

2. Establishing standards and norms and developing assessment tasks

The second phase in each country was designed to work with teachers with a view to developing a framework to profile learning achievement. Teachers were asked to concentrate on a limited number of Learning areas. These were confined to Literacy (speaking, reading and writing) and Mathematics (number, measurement, area, investigations).

Meetings were held in both countries to review 'indicators of achievement' in Literacy and Mathematics derived from the assessment systems of a wide range of countries. Teachers were asked to develop, from their own professional understandings of what learners are capable of achieving, a hypothetical framework consisting of four levels on which children's learning could be profiled. Examples of how this was achieved in other countries were shared and discussed.

In both countries, teachers developed a rudimentary framework consisting of the following levels.

Level 1	Basic Level	Basic knowledge, skills, competencies and attitudes
Level 2	Emerging	Developing or emerging skills and competencies
Level 3	Established	Skills and competencies firmly established
Level 4	Advanced	Advanced skills, knowledge

Work was also begun, in a very rudimentary way, on developing procedures to gather evidence of 'what children could do'. This included thinking about ways in which teachers could use assessments in classes which were often as large as 120. The principle, was to involve teachers in the development of procedures for assessing students.

3. Developing procedures for assessment

Teachers began to develop an initial set of assessment tasks. It was necessary, however, for these tasks to be refined and developed further. The initial set of Assessment Tasks produced by teachers at an in-country workshop were brought back to the University of Bristol for further development. (The completed set of tasks is contained in a separate volume). It suffices here to describe briefly the purposes and nature of the assessment tasks:

In Malawi the researchers worked with groups of teachers from the Infant, Junior Primary and Senior Primary sectors to develop tasks in various areas of the English and Mathematics curriculum. For the first trial activity in schools, the researchers developed tasks in the number curriculum at the three levels.

In Mathematics the purpose of the tasks was to provide data on what pupils knew and were able to do, on the difficulties they experienced by pupils and the mistakes which they made. To this end, three sets of tasks were developed at each level. First, there was a set of aural tasks where teachers would read questions to the class and the pupils would make individual responses on paper. Second, there was a set of tasks presented in written form for individual response by pupils. Finally, there was a group task which involved small groups of pupils working together and producing both written and oral reports on their work. Tasks were usually of a closed kind with a single correct answer the achievement of which required the pupil to possess specific from knowledge or skill. However, there were a number of less orthodox problems and more open questions which were intended to reveal pupil thinking.

The Languages tasks were divided into reading and writing and included three tasks for each of the different levels. For the Infant section, Task 1 was an early spelling task designed to assess whether children could recognise and use single letters and groups of letters to represent whole words or parts of words. The second task assessed children's' capabilities as independent writers, while the third task assessed early reading. Here, the purpose was to find out whether the child understood that it is the print (the letters and words) which tell the reader what to read.

For the Junior Primary section, three tasks were developed. Task 1 was designed to gain an understanding of children's reading, particularly their independence, fluency, accuracy and comprehension. A reading record was created from a passage indigenous to the Malawian context and teachers were to use this record in gaining an impression of children as independent readers. Teachers were further required to make judgements about children's comprehension by asking them to retell the content of the passage and by making predictions of what might happen next. The second task was designed to assess children's capabilities as independent writers. This was divided into three types of

task which were, an aural task where children listened to a passage read to them and they were asked to make up their own ending to the story. Task two required children to write a short story from a picture provided and Task 3 required the children to give a factual account which involved a description of their school.

The Senior Primary Section were provided with reading and writing tasks. The reading task required pupils to interpret tables and diagrams in order to test their comprehension and the writing task demanded the production of a 'personal account'.

An accompanying set of Notes for Teachers was provided for each set of tasks.

In Sri Lanka, the procedures involved working with the National Institute of Education (NIE), rather than with teachers directly because of the language problems. The NIE staff were organised appropriately to include three members each of the Language Committees in Sinhala, Tamil, English and Mathematics. As in Malawi, the task was to establish a rudimentary framework for profiling learning.

The NIE staff engaged with the task of producing assessment tasks for Year 4 students. The orientation of the tasks was similar to those developed for Malawi. As was the case in Malawi, these tasks remained in fairly rudimentary form and were brought back to the University of Bristol for modification and further development. The tasks were to be returned to the NIE for translation into Sinhala and Tamil.

Further meetings were held in both countries to finalise the tasks for implementation and to set up the basis from which the Centre for Educational Research (CERT) in Malawi and the National Institute of Education (NIE) in Sri Lanka could provide support to the teachers in administering the tasks. Both CERT and NIE organised meetings with teachers and trialed the tasks in the classrooms.

Trials - Administering tasks, collecting evidence and refining the profiling system

A major activity between the second and third phase of the study involved trialing the tasks. Teachers administered the assessment tasks in their classrooms to establish the usability of the tasks and children's responses to them. They also collected samples of children's work. These samples were needed to refine the levels in the profiling framework.

Once the first set of tasks had been administered, teachers in both countries brought samples of children's work to a meeting. In preparation for the meeting, teachers analysed the samples of work and awarded each piece of work a level. They wrote their justifications for awarding the different levels on the basis of answering questions about the piece of work. These questions were provided on the teacher record sheets for each task.

At the meeting teachers worked in pairs and small groups and discussed the samples of work they had brought with them. They exchanged samples and re-rated pieces of work, all the time providing justifications, on the basis of the work in front of them, as to the levels being awarded.

Through this process, teachers in each country and in each sub-group were eventually able to agree on samples of work which could be used as exemplars for each of the 4 levels in the profiling framework. These exemplars and other samples also provided teachers with the basis for developing statements to describe what might be expected at each level. These level descriptions were kept broad enough to accommodate most of the samples teachers had been exposed to over the course of the meetings.

4. Administering tasks, collecting evidence and developing profiles

The third stage of the research involved teachers and researchers in administering a second batch of tasks in their classrooms. This stage required the teachers to work independently to administer the tasks and to collect samples of children's work.

Each sample of work was to be analysed by the individual teacher who was guided in doing so by questions included in the Teacher Record Sheets provided with each task. Teachers also had to write their own comments of the 'standard' the work had achieved and to award a level score on that basis.

5. Profiling Learning

The final stage of the research involved teachers meeting together in order to standardise the assessment framework and to ensure that their judgements were reliable and valid.

Once again teachers selected samples of their pupils' work which they felt spanned all four levels. Once again, they worked in pairs and small groups where they exchanged samples and validated the levels awarded to each piece of work.

When it was clear that the teachers' assessments were standardised, i.e., that the reliability of their ratings was consistently high (inter-rater reliability was scored on Cohen's Kappa) teachers were organised in groups to profile the entire sample of pupil scripts from all the sample schools.

Chapter 5 - Results

Part 1 - Teaching and Assessment

One aim of the study was to identify what kinds of teacher activities and what assessment practices existed in both countries. During the research period, a large number of observations was carried out and teachers were interviewed.

The research was particularly concerned with finding out how literacy and mathematics were taught and assessed in the two countries.

In Malawi the classroom activities observed showed that there was very little teaching of reading. Where reading activity was observed, teachers read to the whole class from text books. Listening to individual children read from fiction and non-fiction readers occurred in a small percentage of the lessons observed, although in most of the occasions observed, teachers were engaged in another activity, usually, marking exercise books, while children were called to the front to read. The rest of the class was asked to follow the text in their books.

Only in a very few of the lessons observed did the teachers take a active role in reading. They tended to read 'with' children and helped them when they encountered difficult words. Even here though, the teacher was more concerned with correcting reading errors, rather than helping the child enjoy the book by drawing attention to characters, pictures, print and so on.

No records were kept on children's abilities as readers.

Teaching support for the development of writing was minimal. There was little evidence that teachers were engaging in activities designed to enhance and enrich the creative and factual writing abilities of their students.

In only a small number of the lessons observed did teachers provide students with a variety of 'tools' for writing. In some of the lessons observed, teachers provided resources for writing. This consisted of teachers 'recycling' paper to make books for students to write in. This was particularly encouraging as in most cases, teachers pointed to the lack of resources for writing as a reason for limited writing activity. Even more encouraging was where teachers helped students to identify different audiences for their writing. In about a third of observed English lessons, teachers emphasised for example the differences between writing a 'friendly' letter and a 'formal' letter. Very few teachers viewed writing as a 'process' where they encouraged students to produce more than one draft. This however, was not the norm in Malawi.

The assessment of writing was focused on formal accuracy - grammar, spelling and punctuation - and a mark, usually out of 20, was awarded. Very few records were kept.

In mathematics, teacher concentrated mainly on addition, subtraction, multiplication and number work of different kinds. Very few, if any, observations were made of children investigating or solving problems through group discussion. The assessment of mathematics consisted of marking answers right or wrong and very few records of children's progress were kept.

In Sri Lanka it was clear that the context of learning and teaching was very different to that in Malawi. Schools were far better resourced and teachers were engaged in numerous activities to support both literacy and mathematics.

Most encouraging to observe was established practice of recording student progress. Numerous innovative teacher made systems for recording children's progress in literacy and mathematics were visible in all the research schools. One of the researchers on the team made the following remark:

> 'In classrooms, I came across recording systems used by teachers to record pupil progress - achievement on several criteria judged at four levels, each half term. Progress over the year is monitored, in some cases, publicly displayed and, in one school, analysed and available in the Principal's study. For one teacher, her record led to the short-listing of pupils who needed special help and these were monitored more closely with a more detailed set of criteria. In mathematics, I saw reports, or heard about, several more substantial surveys of what pupils can do at various stages in the primary school.'

These findings are consistent with the view taken by Little (1991). According to her, continuous assessment was introduced as an alternative procedure to formal testing during the 1972 reforms in primary education, mainly to reduce the anxiety of sitting tests and to ensure that corrective measures could be taken quickly as soon as teachers realised the particular competencies each child failed to master. The use of assessment for formative, rather than summative, purposes was expected to help improve the competence level of pupils gradually. Teachers, however, need much training and commitment as records need to be kept carefully and regularly.

Currently, continuous assessment is expected to be used in Years 1 - 3 while end-of-term formal testing is used in years 4 and 5. Although a format has been prepared, and guidance on filling it out has been provided, widespread use of these procedures is not evident (Little 1991). By contrast, end-of-term formal testing is evident in most schools, even for Year 1.

It is clear from the above account that there is a considerable variety of assessment practices in use in schools in the two countries studied. This ranges from, at one extreme, teachers who are faced with such an overwhelming combination of huge class sizes and lack of even the basic resources that they are unable to employ any sort of systematic classroom assessment practice at all. At the other extreme are teachers whose professional skill and commitment has led them to develop their own procedures for maintaining pupils' progress in order to support individual learning most effectively.

Clearly, it would not be possible to devise a system that could meet this range of needs. However, these observations do underline the value of teachers routinely being provided with suitable assessment tools which would enable the majority to develop and operate much more useful systems for monitoring individual pupil achievement and for providing classroom-level feedback on the profile of student learning.

Part 2 - Assessing Literacy Learning

General principles

Literacy learning was assessed in Malawi and Sri Lanka. In both countries, both English and other national languages were assessed. In the case of Malawi, assessments were made of children's oral and written language and of reading in English and Chichewa. Similarly, in Sri Lanka, assessments were made of children's oral, written work and their reading in English, Sinhahla and Tamil.

In each case, standard tasks, designed by the researchers and participating teachers were used to assess achievements.

Tasks to assess literacy learning in Malawi and Sri Lanka

The tasks were designed to assess children's abilities to communicate in different communicative contexts. In assessing Oracy and Reading, teachers were asked to select six to ten children in their classes on the basis of whom they thought were 'good', 'average' and 'weak' communicators. Once they had made their selection, they were to write the names of these children on Record Sheets which were provided. For the assessment of writing teachers were able to select all the children in their classes. Over the course of the research, the communicative competencies of the selected samples of children were assessed. Teachers recorded the results on the record sheets, and in the case of writing, collected corpora of texts from their students.

Because of the diversity of the student samples, on these scores of children aged nine to 10 years (junior primary in Malawi and year 4 in Sri Lanka are reported here).

Developing a framework for the assessment of literacy learning

As described in chapter 3, teachers met in groups on several occasions to discuss the samples of children's work. Each teacher brought to these meetings, samples of children's records (oral language was recorded verbatim on the 'teacher record sheet'), their own assessment of the level these samples had achieved and the teachers written comments of the work, justifying the level awarded. Teachers were encouraged to bring samples of those children's work who they had rated as 'doing well', 'average performance' and 'experiencing difficulties'.

At the meetings teachers worked in small groups in which they exchanged the samples of student's work. The went about the task of studying these samples in order to determine what it is that children do when confronted by the given tasks. They looked at the comments written by the class teacher and the levels awarded to each sample. On this basis, teachers began to draft statements describing each level.

Once the descriptions for each level had been decided, a second sample of records was selected. Each teacher was provided with a scoring sheet and rated each record.
The level of agreement was high amongst teachers when these records were subjected to a statistical reliability procedure (Cohen's Kappa).

This exercise allowed teachers to refine the level descriptions they had agreed on earlier to accommodate a wider variety of student work.

The level descriptions differ between countries, but not markedly, and also between English and national languages within each country. The level descriptions for English in both cases were lower that the expectations expressed in formal curriculum documents of what students could achieve in the national languages at each level.

The literacy scale below is an example for the assessments conducted in English in Malawi.

The Literacy Scale and Level Descriptors

Oracy

Level 1
The child shows awareness of the context and can name things in the illustration. The child is capable of making short sentences or statements about things in the illustration.

Level 2
The child shows an awareness of the context and can describe individual things or events in the illustration in simple terms. There is some evidence of the use of conjunctions.

Level 3
The child understands the context portrayed in the illustration and is able to describe events and items in the illustration in a simple and more complex sentences. The child is also begins to interpret the illustration and to reason or question beyond what is visible.

Level 4
The child understand the context portrayed in the illustration and is able to talk fluently about the events and items using a wide range of vocabulary and sentences in which meaning is embedded in complex ways. The child is able to interpret the illustration and reason and question what is not visible

Administering Oral Language Tasks in Malawi

The tasks comprised of an illustration, taken from language books for ten year olds children in both countries (see example on the next page). The selected students were to look at the illustration and talk about it. Teachers were provided with Record Sheets and recorded what children said verbatim, as far as was possible.

An illustration of the task is shown overleaf, and the instructions to teachers and teacher record forms are contained in the appendices.

The Samples

In Malawi, 270 samples of children's use of English language were collected and the same children were assessed again in Chichewa. The age range was nine to ten year olds. In Sri Lanka, 60 samples of children's oral use of English language were collected; 20 samples of children's oral use of Tamil; and 80 samples of their use of Sinhala were collected.

Interpreting the Literacy Profiles

The following literacy profiles were constructed through an analysis of all samples of children's work in relation to the literacy levels developed in each country.

The results are not intended to be compared between countries nor between languages. The profiles show however what children are achieving in each language, in each country, in relation to the expected standards set by teachers.

Even though level statements are different for each country and within each country in relation to languages, teachers set an arbitrary standard, level 3 in each case, as the desired norm to be achieved by at least 50% of children.

This gives us a basis for interpreting the results of each country in terms of children's achievements in relation to the benchmarks set for each learning area.

Assessing Oracy: Malawi

The illustration on the following page shows the task used to assess the use of oral language in Malawi. The profiles of achievement are shown below.

ENGLISH - JUNIOR PRIMARY
ILLUSTRATION FOR ORAL TASKS

WORKSHEET 1

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Profiles of Achievement
Speaking in English and Chichewa

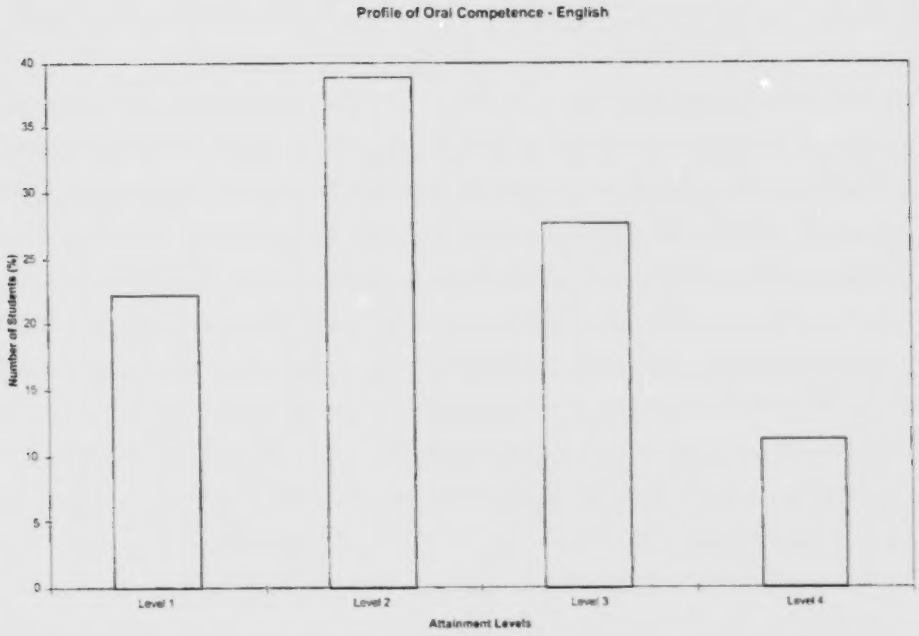

Figure 1 shows that 22 percent of children achieved Level 1. 38.8 percent of children achieved Level 2 while 27.7 percent achieved Level 3. Only 11.1 percent of children achieved Level 4.

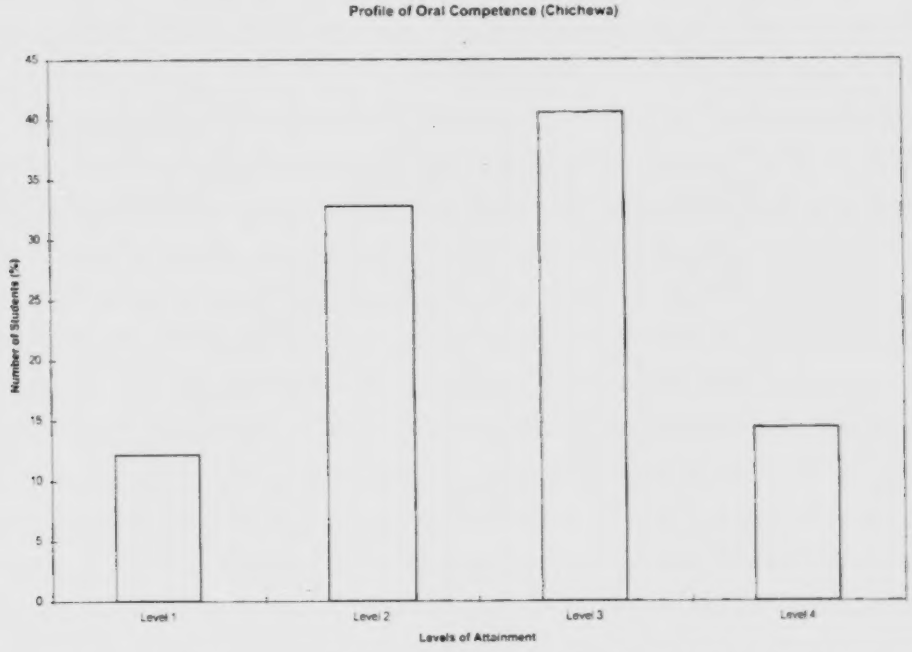

Figure 2 shows that 12.2 percent of children achieved level 1. 32.9 percent of children achieved level 2 while 40.7 percent achieved level 3. Only 14.4% of children achieved level 4.

EXAMPLES OF INDIVIDUAL CHILDREN'S PERFORMANCES FOR EACH LEVEL

The following examples drawn from oral samples in Malawi gives an illustration of the kinds of work considered to be at levels 1-4. In these examples, the verbatim records as written by the teachers are illustrated in the boxes below and the teachers comments, justifying their decisions to award a particular level, are also reproduced.

Level 1

Box 1 - Example of verbatim record of oral language

'A bicycle, a pump, a tube, tyre, basin, water, bell, carrier, shoes, two boys, trousers, puncture. I am mending my bicycle. To find the puncture wika tayala m'madzi apeze puncture ndi kumata, ndi kupopa ndi kukwera'.

In this example, the child simply names items in the illustration. An attempt is made to construct the events illustrated in the picture but the child fails to follow through completely in English and completes the description in Chichewa.

The teacher has this to say about the child's performance.

Box 2 - Teacher comments and reasons for awarding level

'Chifuniro is weak. He only mentions parts of the bicycle and other things he sees in the picture. But he fails to describe what is going on in English

He knows what is going on thus mending a puncture but he fails to put the description in proper language.
His imagination is quite real according to what the illustration is about.
The information given is relevant to the illustration . He knew that it was about mending a picture'.

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Level 2

Box 3 - Example of verbatim record of oral language

`I can see a man, a pump, a tube, a tyre, basin of water, handles, a chair, a band, a chain.
They are mending my bicycle. A tube has a puncture. ***Aika m'madzi kuti awone chibowo ndi' kumata. a kemmata aika mu tyre ndi kupopa'.***

In this example, the child names items in the illustration but there is an attempt to construct simple sentences. The child also is clearly able to construct the events illustrated in the picture but like the child above, fails to follow through completely in English and completes the description in Chichewa.

The teacher has this to say about the child's performance.

Box 4 - Teacher comments and reasons for awarding level

`This pupil is not quite good or weak but average because he can understand what is taught and he does well in certain aspects.
In this issue he only lacked vocabulary to expand his illustration.
The information given was more relevant to the illustration'.

Level 3

Box 5 - Example of verbatim record of oral language

`I can see a basin of water, a tyre, a tube, a pump, a boy, a man, spokes, a chain.
The boys are mending a bicycle. A kupopa kuti apeze puncture. take the tube from the tyre then put in the basin of water to find where the puncture is .
Then ***atenga mwale kupalira chibowa ndi kumata ndi mphira. Ndiye alowetsa mu tyre ndi kupopa'***.

In this example, there is evidence of an attempt to construct simple sentences. The child is also able to construct and interpret the events illustrated in the picture even where the actions aren't themselves illustrated. For example the child say `take the tube from the tyre then put it in the basin of water to find where the puncture is'. The child also lapses in to Chichewa to complete the description.

The teacher has this to say about the child's performance.

Box 6 - Teacher comments and reasons for awarding level

`This girl is quite good. She tried to mention all what she sees in the picture. She was also able to say what was being done in the picture - only that she failed to say everything in English. The information given was quite relevant to the illustration. She said everything about mending a puncture and it was good'.

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Level 4

Box 7 - Example of verbatim record of oral language

`Once there was a boy who was walking along the road. at the same time he saw a man sitting with his bicycle and the boy said . `hello sir. what are you doing?'
`I am mending my bicycle' the man answered.
`Can I help you ' a boy asked. `what should I do?
First take out the tube from the tyre and find out the puncture. I will prepare it for you'
So the boy is helping the man.

In this example, the child is aware of the context of events. She is able to identify what is happening in the illustration and describes these in clear sentences. The child has expanded on the events and has brought her imagination into play. She talks of events `before ' those illustrated in the picture, thus widening the context.

The teacher has this to say about the child's performance.

Box 8 - Teacher comments and reasons for awarding level

`This girl has described the situation in an imaginative way. The description of the picture is true and relevant. She has expanded upon the illustration and her language is very good.

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Assessing Oracy: Sri Lanka

Tasks to assess oral competencies in Sri Lanka

As in Malawi, the tasks were designed to assess children's abilities to communicate orally in different communicative contexts. Here too, teachers were asked to select six to ten children in their classes on the basis of whom they thought were `good', `average' and `weak' communicators. Once they had made their selection, they were to write the names of these children on a Record Sheet which was provided. Over the course of the research, the communicative competencies of the selected sample of children were assessed.

Administering The Task

The task comprised of an illustration, taken from a reading book in for ten year old children in Sri Lanka - `Let's Go to the Fair'. The illustration is of a mother and her two children buying fruit from a fruit stall. The selected students were to look at the illustration and talk about it.

The English task is shown overleaf. The tasks in Tamil and Sinhalese are contained in the appendices.

The Sample

60 samples of children's oral competence in English were collected. 20 samples of work were collected from Tamil speaking schools and 80 samples of work from Sinhalese speaking children.

ක්‍රියාකාරකම - 1 ACTIVITY - 1 செயற்பாடு - 1

(For speaking) Time (5min) enough.

Profiles of Achievement
Speaking in Tamil, Sinhala and English

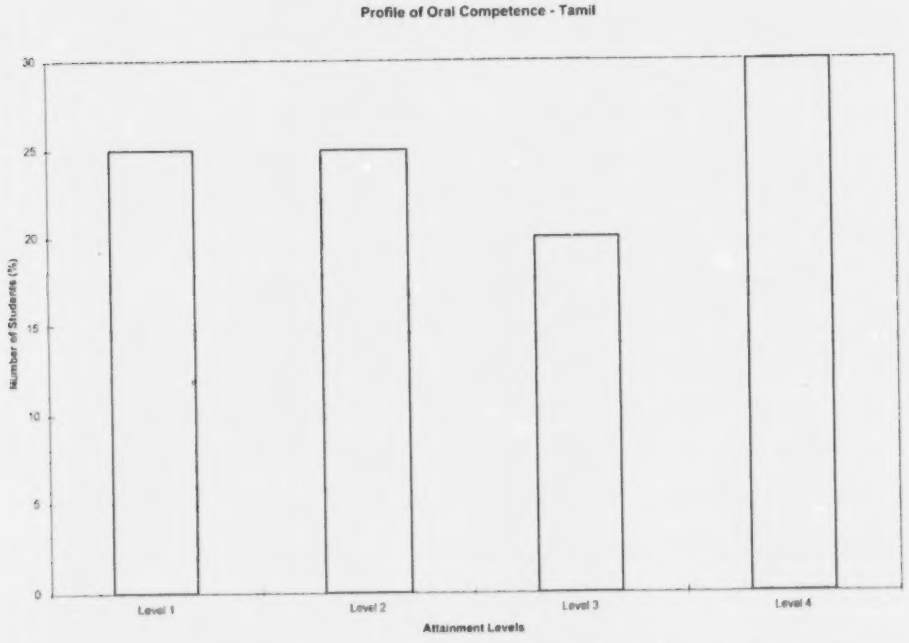

Figure 4 shows that 50% of students are achieving levels 1 and 2 in oracy in Tamil. 20% are achieving Level 3 and 30% level 4.

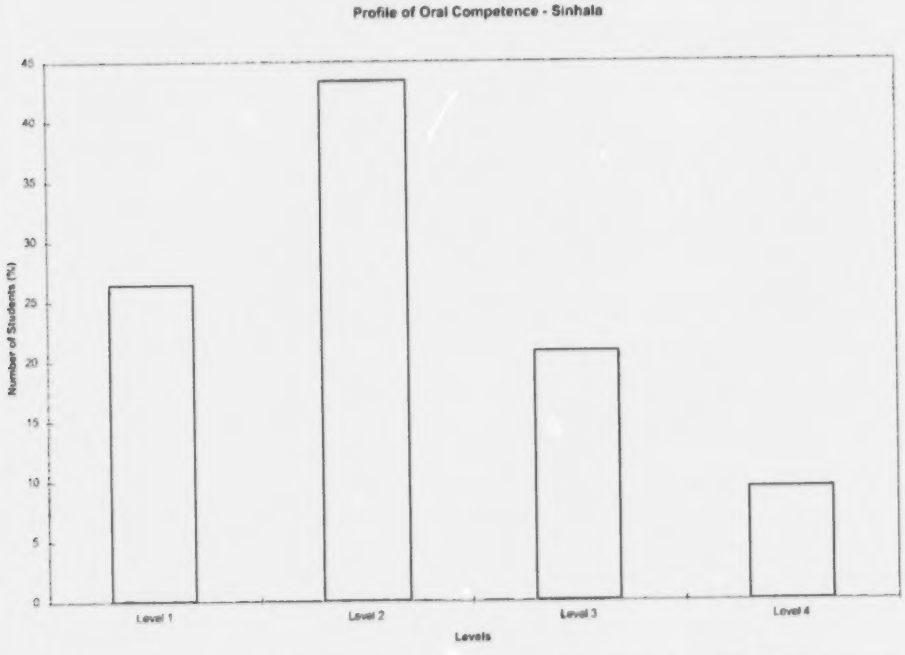

Figure 5 shows that 26.4 % of children are achieving Level 1, 43.3% Level 2, 20.7% Level 3 and 9.4% Level 4.

41

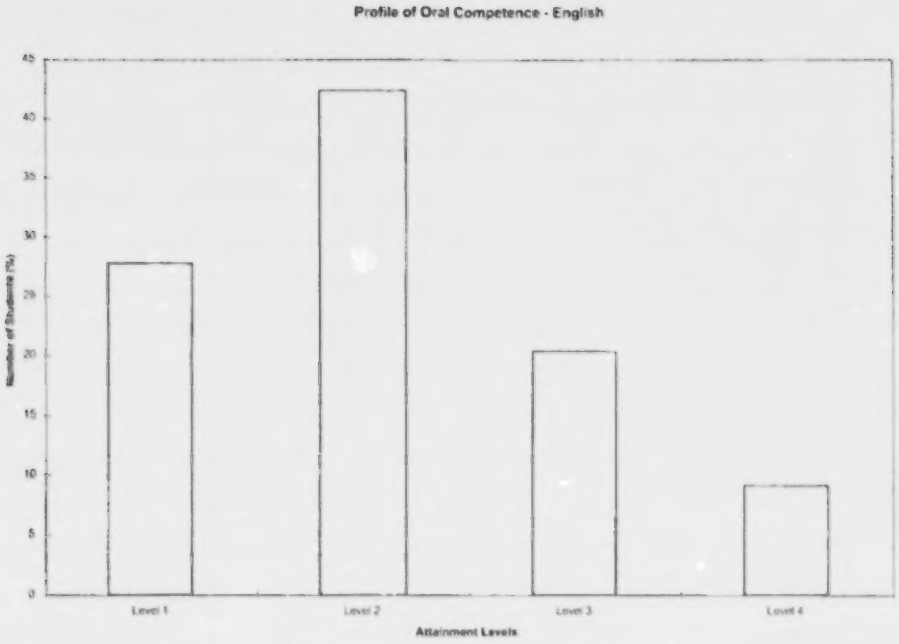

Figure 6 shows that 27.7% of children achieved Level 1, 42.5% Level 2, 20.3 percent Level 3 and 9.2% Level 4.

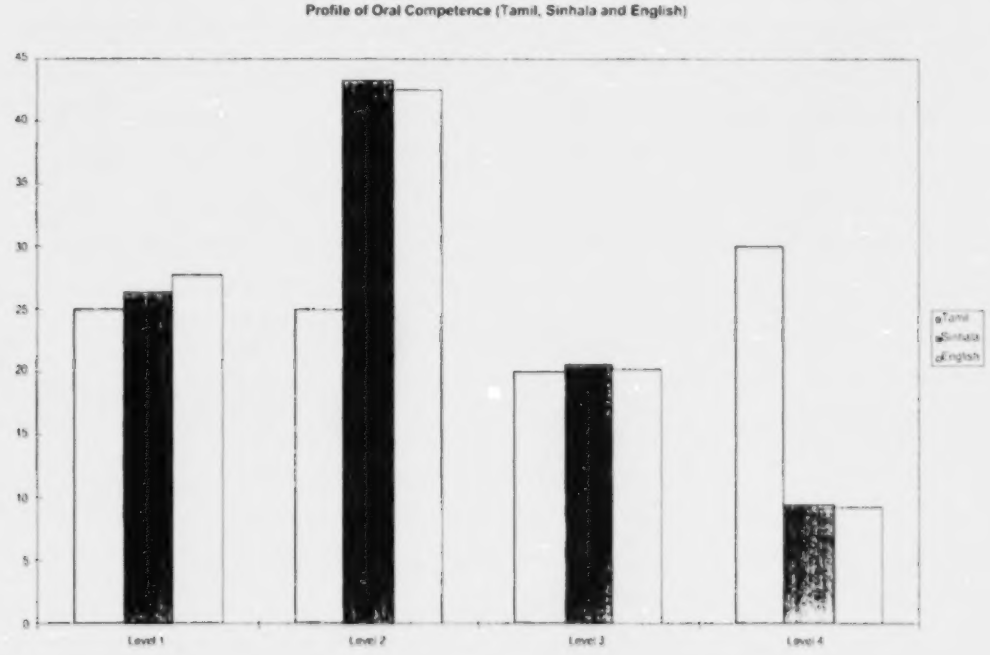

Figure 7 shows the profiles of achievement in oracy for all three Language groups.

EXAMPLES OF INDIVIDUAL CHILDREN'S PERFORMANCES FOR EACH LEVEL IN ENGLISH (SRI LANKA)

The following examples drawn from oral samples in Sri Lanka gives an illustration of the kinds of work considered to be at levels 1-4. In these examples, the verbatim records as written by the teachers are illustrated in the boxes below and the teachers comments, justifying their decisions to award a particular level, are also reproduced.

Level 1

Box 9 - Example of verbatim record of oral language

'There are house. There are bad. There are boy. There are two birds. Play cricket. Tree big. It is sun. There bad (bat). House. Sun sky

Teachers were asked to make a judgement of each child's writing proficiency and to complete notes on each child according to the following questions:

1. Does the child talk fluently?

In this example, the child simply names items in the illustration. According to the teacher the child did not talk fluently, and hesitated very much. She also mispronounced many words.

2. Does the child describe the illustration in an imaginative way (describing imaginative events) or simply describe the objects in the picture?

According to the teacher for the example given above, the child showed little imagination and simply tried to name the objects in the picture.

3. Is the information relevant to the illustration?

In this example the child confined their description to what they could see in the illustration.

The teacher completed the record as follows:

Box 10 - Teacher comments and reasons for awarding level

This child is very weak in building up sentences. Most of her sentences were grammatically wrong e.g. there are house, there are boy. She didn't have confidence at all. In order to make her speak I had to point to the objects in the picture. Therefore I judged this child to be at a level one in speaking.

Level 2

Box 11 - Example of verbatim record of oral language

This is a picture. There is a big tree. There is a sun. There is a house. There are birds in the sky. There are flowers. There are boys. They are playing cricket. They are not happy. There are windows. Tall boy is wearing a T-shirt. There is a roof. There is a fence. There are birds. There are mountains. There are trees. The sun is in the sky. There are clouds.

1. Does the child talk fluently?

According to the teacher the child spoke without any hesitation and her speaking was fluent.

2. Does the child describe the illustration in an imaginative way (describing imaginative events) or simply describe the objects in the picture?

According to the teacher the child described the illustration in an imaginative way e.g. 'there are two boys. The boys are playing cricket. The ball is in the window.'

3. Is the information relevant to the illustration?

In this example all the information was confined to what was visible in the illustration and as such relevant.

The teacher completed this part of the record as follows:

Box 12 - Teacher comments and reasons for awarding level

In building up her sentences she made a good attempt. She gave meaningful sentences relevant to the picture but she made some grammatical mistakes in describing what has happened. Her description was good. Her pronunciation was good and her description of the picture was mostly accurate. On the basis of this evidence I judge her to be Level two.

Level 3

Box 13 - Example of verbatim record of oral language

'This is a garden. It is a sunny day. The time is twelve o'clock. There is a big tree. There is a ball. There is a wicket. There are two boys. There are flowers. There are birds. There are mountains. There are clouds. There is a fence around the house. The boys are playing cricket. They are not happy. The ball break the glass. The tall boy is wearing a T-shirt. One boy is wearing pads.

1. Does the child talk fluently?

According to the teacher the child spoke very fluently and her pronunciation was good.

2. Does the child describe the illustration in an imaginative way (describing imaginative events) or simply describe the objects in the picture?

The child described the picture in an imaginative manner and the teacher points out that although the child described the situation in the picture she used her imagination on several occasions e.g. 'the boys are not happy'.

3. Is the information relevant to the illustration?

In this example all the information provide was relevant to the illustration.

The teacher completed this part of the record as follows:

Box 14 - Teacher comments and reasons for awarding level

In building up her sentences she used the same structure e.g. there is..., there are... By looking at the position of the sun she guessed the time of day correctly. The child says 'There is a sun. The time is twelve o'clock.' She made one mistake i.e. 'the ball break the glass.' but overall her speech was very good. This girl wanted to describe the situation not the objects. Her sentences are very meaningful. I think she is a good girl in her speaking therefore she was judged to be level 3.

Reading Tasks

The reading tasks were designed to gather evidence of children as independent readers. The task provides a broad assessment of children's reading, allowing them to demonstrate their ability to read aloud from a text, show what they have understood and give a personal response.

Reading books in Malawi and Sri Lanka used at the levels of education for the children involved in the study were selected and extracts were selected to serve as the reading task.

A 'running record' was developed, (a matrix containing a copy of the text to be read , with each word contained in a separate box in the matrix and with blank spaces beneath each word). Teachers would follow the reading and mark the record for each reader, indicating accuracy, self correcting strategies, words which are omitted and so on.

An assessment record sheet was also provided for each reader. On this form, teachers would record comments on how the child read, what they understood from the text and their attitude towards the text itself.

The Literacy Scale and Level Descriptors (Reading)

The following levels and level descriptions were decided upon by teachers in Malawi. A similar set of descriptions for each level was decided upon by teachers in Sri Lanka. It is worth noting again that there were slight differences in what teachers expected reading levels should be in English and for national languages.

Level 1
The child mis-reads most words and has no strategy for reading unfamiliar words. S/he does not show an awareness or an understanding of what s/he is reading.

Level 2
The child recognises some words consistently and shows awareness of punctuation. The reader shows an appreciation of the text.

Level 3
The child reads with accuracy and shows understanding of what he or she is reading through expression, volume and emphasis. She expresses opinions about the text.

Level 4
The child reads with accuracy, shows understanding by reading through expression. S/he has the ability to express opinions about main events and ideas.

Assessing Reading: Malawi

The illustration on the following page is an example of a task used to assess the reading of 10 year olds in Malawi.

Their achievements are profiled below.

ENGLISH - JUNIOR PRIMARY
READING TASK

Dziko and the *msuku* tree

Dziko lived in a village near a big forest. He was a strong boy, but he did not like to work.

One day he sat under a tree in the forest. Suddenly he heard a noise. He listened. Somebody was singing, but Dziko did not know the song.

He stood up. Then he saw an old man. He was talking to a tree. He said, '*Mzuku* tree, my children want something to eat. They are hungry. But I don't have flour or fish. Please, help my children. They want some *nsima* and fish.

Profiles of Achievement
Reading in English and Chichewa

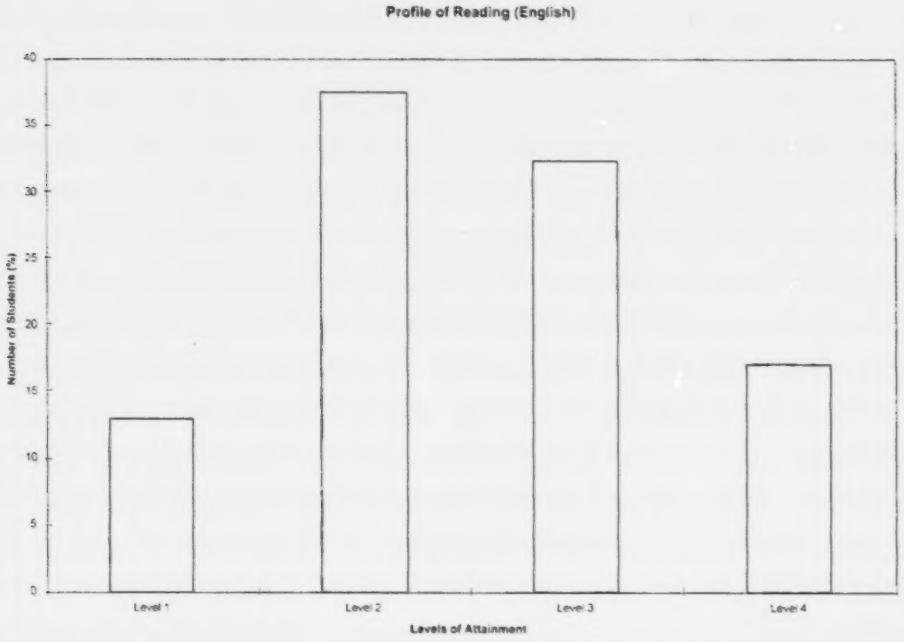

Figure 8 shows that 13% of children achieved Level 1, 37.6, Level 2, 32.4, Level 3 and 17% achieved Level 4.

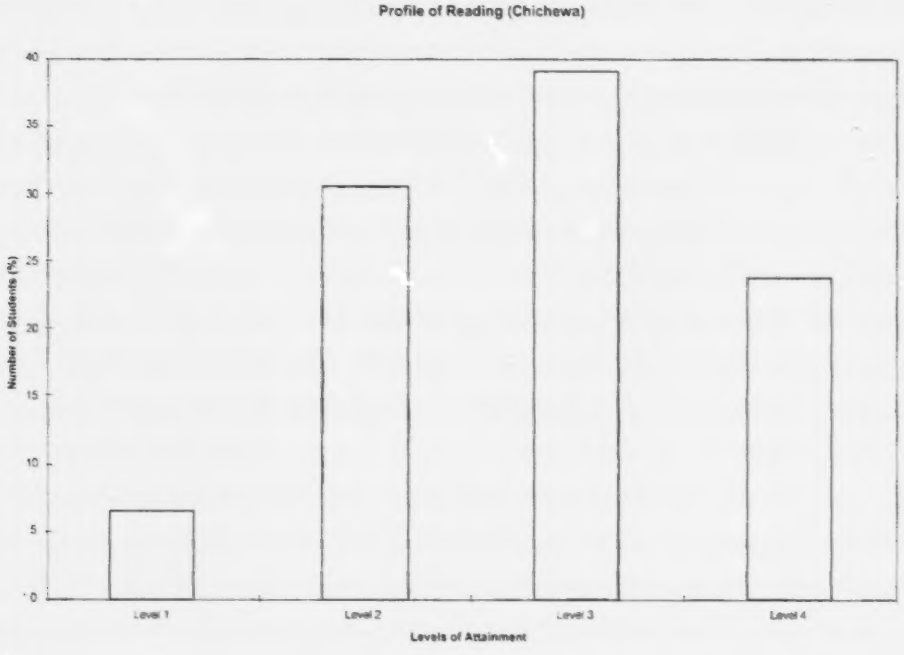

Figure 9 shows that in Reading Chichewa, 6.5% of children achieved Level 1, 30.5, Level 2, 39.2%, Level 3 and 23.8% achieved level 4.

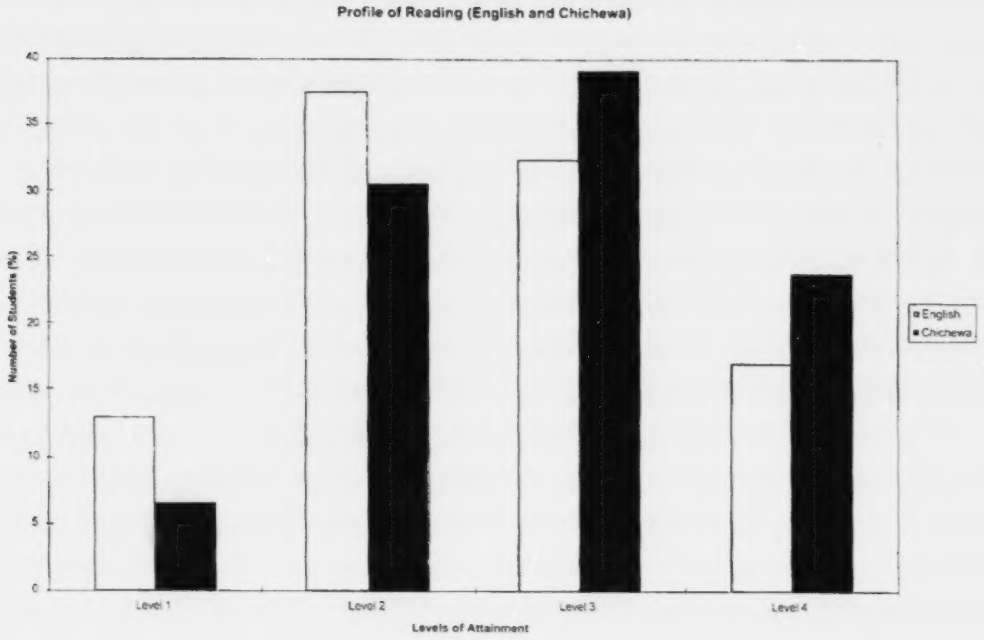

Figure 10 shows the profile of achievement for Reading in English and Chichewa.

EXAMPLES OF INDIVIDUAL CHILDREN'S PERFORMANCES

The following examples of teacher comments based on evidence from both the running records and reading records of children's reading in Malawi, provides an illustration of how decisions were made in awarding different levels.

The example shown here is that of a child who was awarded Level 2.

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ENGLISH - JUNIOR PRIMARY
READING RECORD

Child's name: ..... Class: .....
Class teacher's name: .....
Name of school: .....

Dziko	lived	in	a	village	near
a	big	forest.	He	was	a
strong	boy,	but	he	did	not
like	work.	One	day	he	sat
	A Walk				
under	a	tree	in	the	forest.
Suddenly	he	heard	a	noise.	He
listened.	Somebody	was	singing,	but	Dziko
did	not	know	the	song.	He
stood	up.	Then	he	saw	an
old	man.	He	was	talking	to
a	tree.	He	said,	'Msuku	tree,
				Mzuku	
my	children	want	something	to	eat.
They	are	hungry.	But	I	don't
have	any	flour	or	fish.	Please,
		A Floor			
help	my	children.	They	want	some
nsima	and	fish.			

What to do

1. Complete the reading record as follows:
   - A For words that the child attempts but cannot read (when he or she makes an incorrect attempt at a word, write in the space what he or she actually said).
   - X For any words that the child cannot read and does not attempt. (When a child makes an incorrect attempt at a word, write in the space what is actually said.)
2. Comment on the child's reading performance. Use the set questions to help you.

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ENGLISH - JUNIOR PRIMARY
READING RECORD

Analysis continued . . .

a) Does the child respond to what he or she is reading through expression?

b) Does the child read with accuracy?

c) Does the child show an awareness of punctuation, for example by pausing in appropriate places?

3. Ask the child to retell the story in his or her own words and to predict what might happen next. (Ask the child some questions like: which aspects of the story did you enjoy or not enjoy?)

   Make a judgement about whether the child is able to re-tell the context of the passage, including, at least, two of the main points and whether s/he can make a sensible prediction about what might happen next.

Write your comments here: The child was not able to re-tell the story in his own words, however he predicted that the children ended up finding food from the tree. He could also answer comprehension questions from the passage. He could read with accuracy with a note to punctuation as he was reading.

4. Make a judgement about children's abilities to talk in simple terms about the extent to which they find reading interesting or enjoyable. You could, for example, ask the child questions like: which aspects of the story did you enjoy/not enjoy?

Write your comments here: He enjoyed the story mainly on a person talking to a tree. The pupil failed to re-tell the story due to communication/language problem. He found it difficult to explain the contents of the story in English, but could say correct content of the story in Chichewa.

Assessing Reading: Sri Lanka

The illustation on the following page is an exampíe of a task used to assess the reading of 10 year olds in Sri Lanka.

Their achievements are profiled below.

LET'S GO TO THE FAIR

1

Rani : Mother, let's go
to the Sunday fair.

Mother: All right.

Rohan : Can I come, too?

Mother: Oh, yes. Rani, bring the bag,
please.

Rohan : Let's go by bus.

Profiles of Achievement
Reading in English, Tamil and Sinhala

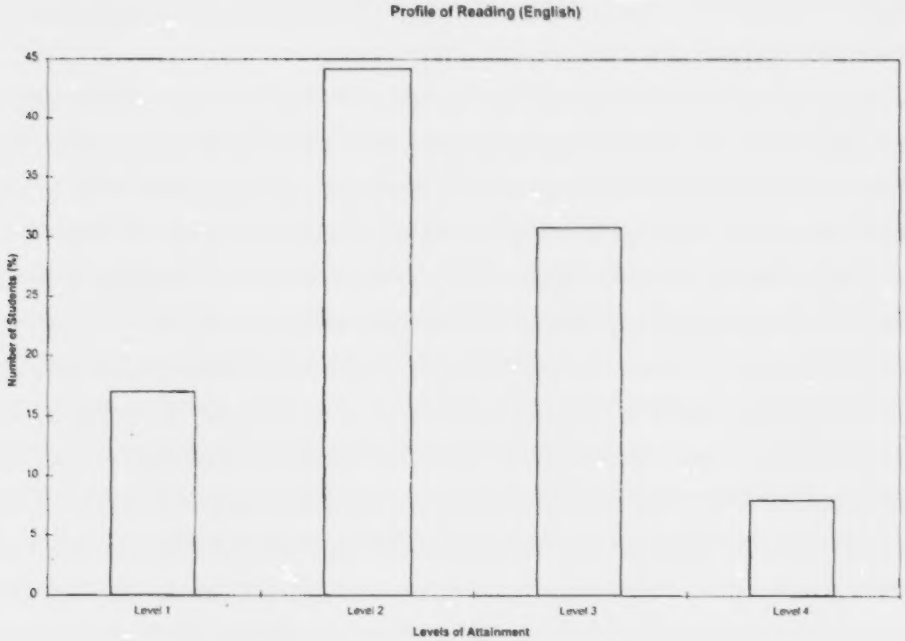

Figure 11 shows that 17% of children achieved Level 1, 44.2% achieved Level 2, 30% achieved Level 3 and 8.8% achieved Level 4.

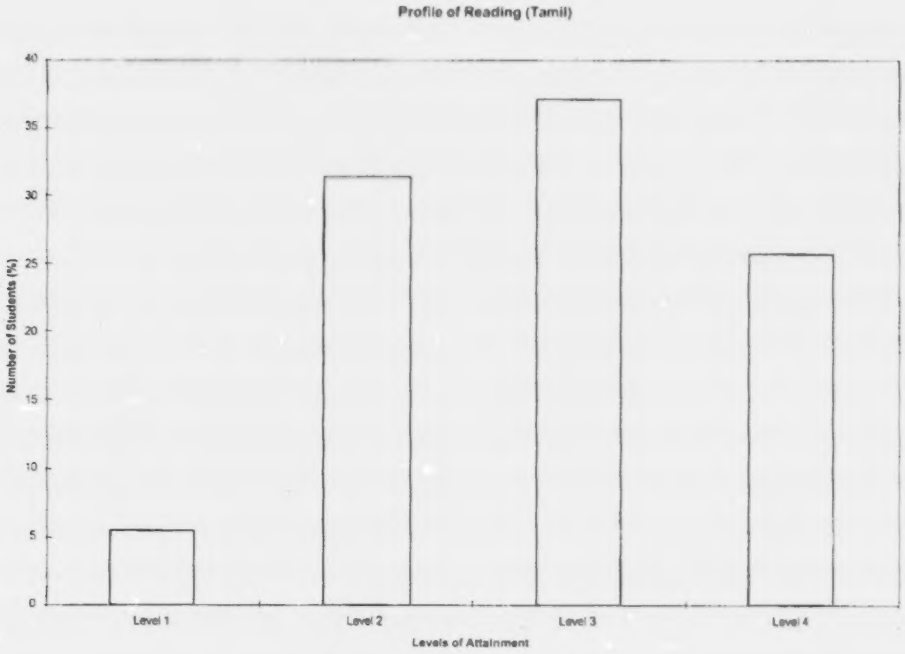

Figure 12 shows that 5.5% of children achieved Level 1, 31.5% achieved Level 2, 37.2% achieved Level 3 and 25.8% achieved Level 4.

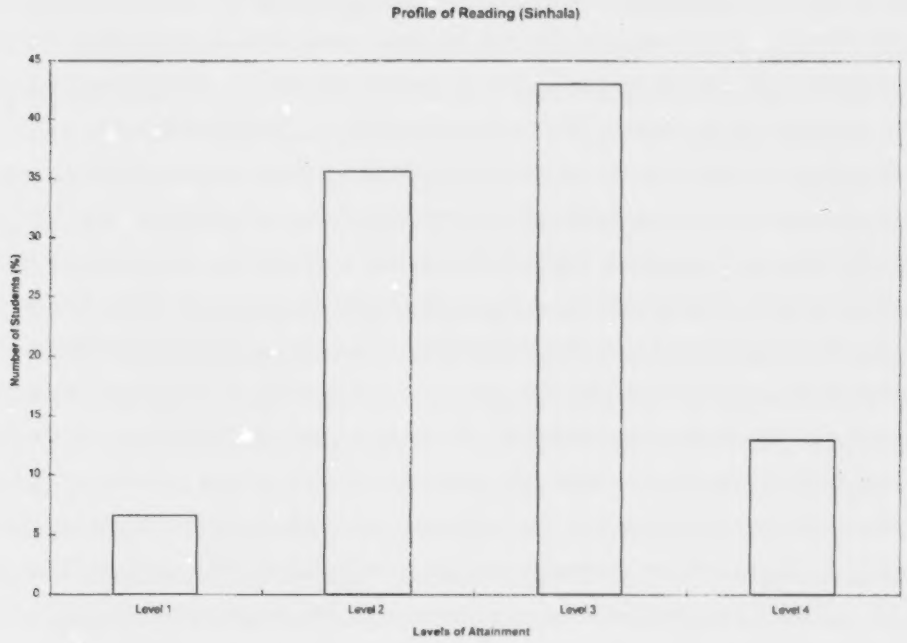

Figure 13 shows that 6.5% of children achieved Level 1, 35.5%, Level 2, 43%, Level 3 and 13% achieved Level 4.

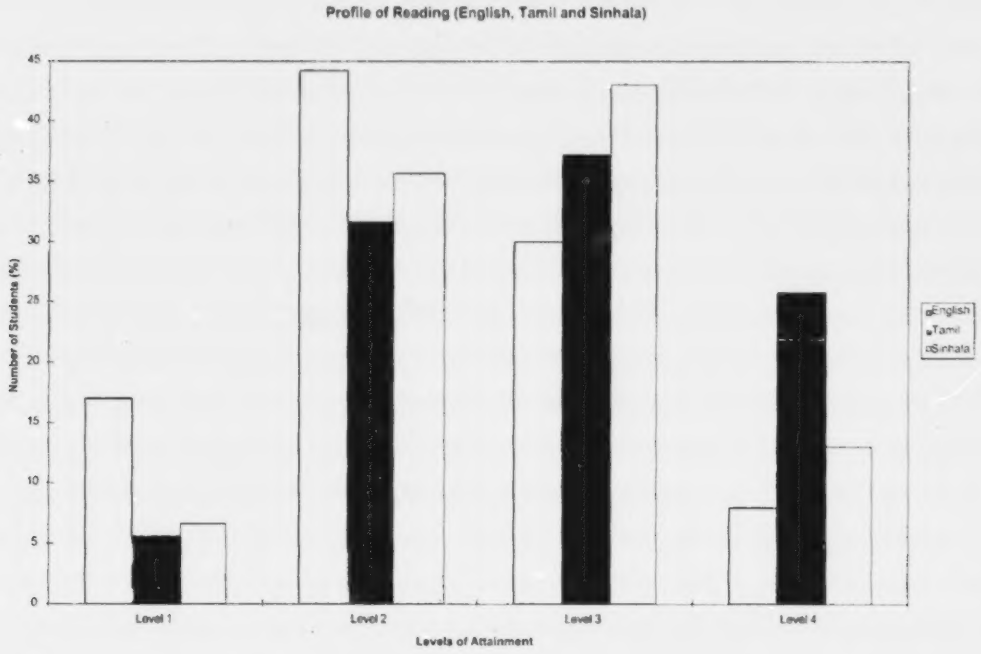

Figure 14 shows the profile of achievement in Reading for English, Tamil and Sinhala

Examples of Running Records and Teacher comments

ENGLISH ~ YEAR IV - READING RECORDS

Mother : Hasitha Piumanthi
Rani : Anuradha Hemamali
Rohan: Chamara Madusanka

Class: 4A G.U.D.S. Bandaketa.
Class teacher's name: Miss. E.M.S.M. Ekanayaka.
School : Sri Sumangala National School, Kuriyapola.

Passage 2: At the fair

MOTHER:	I	want	some	fruit.	Let's	Read well But there was a little hesitate at the word "first"
	✓	✓	✓	✓	✓	
	go	to	the	fruit	stall	
	✓	✓	✓	✓	✓	
	first.					
	x					
RANI:	I	want	a	toy.		Excellent Reading
	✓	✓	✓	✓		
ROHAN:	Yes,	yes.	I	want	a	Really good reading Paused at the correct place. Intonation was good
	✓	✓	✓	✓	✓	
	toy,	too.				
	✓	✓				
MOTHER:	All	right,	but	let's	go	Said "but as "ɔʊ"
	✓	✓	x	✓	✓	Again hesitated at "first (plest)
	to	the	fruit	stall	first.	
	✓	✓	✓	✓	x	
RANI:	These	mangoes	are	nice,	mother.	Excellent reading
	✓	✓	✓	✓	✓	
	Let's	buy	them.		46	
			✓			

ENGLISH ~ YEAR IV - READING RECORDS

Uncle : Saman Kumara Class: year 4
Saman: Amith Lal kulathunga Class teacher's name: Mrs. H. C. D Siriwarden
Mihiri: Tresha Sanjeewani School : k/Pol/Serapees k. Vidyalaya

Passage 3: The present

UNCLE:	Hello,	Saman!	How	are	you?
	✓	✓	✓	x do	✓
SAMAN:	I'm	fine,	thank	you.	
	✓	✓	✓	✓	
UNCLE:	Hello,	Mihiri!	How	are	you?
	✓	✓	✓	x a	✓
MIHIRI:	I'm	fine,	thank	you	uncle.
	✓	✓	✓	✓	✓
SAMAN:	What's	in	the	box,	uncle?
	✓	✓	✓	✓	✓
UNCLE:	It's	a	present	for	you
	✓	✓	x pasant	✓	✓
	and	Mihiri.			
	✓	✓			
MIHIRI:	Oh!	What	is	it?	
	✓	✓	✓	✓	
UNCLE:	Can	you	guess?		
	✓	✓	x gheese		
SAMAN:	Is	it	a	toy?	
	✓	✓	✓	x you	

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MIHIRI:	Is	it	a	book?	
	✓	✓	✓	✓	
SAMAN:	Can	we	eat	it?	
	✓	✓	✓	✓	
MIHIRI:	Can	we	drink	it?	
	✓	✓	✓	✓	
UNCLE:	No,	No,	No.		
	✓	✓	✓		
SAMAN:	We	can't	guess.		
	✓	✓	× geese		
UNCLE:	It's	a	dog.		
	✓	✓	✓		

uncle - Reading was nice. Rising and falling were in his reading. But in some places he dragged some words and stopped reading because he couldn't read the next word easily, example like present, and guess. His presentation was good.

Saman : Questions were not presented in proper way that's mean, rising and falling were not there.

Mihiri : She was very fluent in her reading. She has no hesitation and no mispronuncation. Expressing ideas was good Rising and falling was there.

Overall presentation was good. All the students were active. They pronounced and expressed the ideas nicely.

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Assessing Writing in Malawi and Sri Lanka

Writing Tasks

The writing tasks were designed to gather evidence of children as independent writers The tasks were interested in assessing whether children could communicate meaning to a reader and whether they had an awareness of wide range of the functional aspects of language, including grammar, punctuation and the conventions of spelling and handwriting.

The tasks took as their starting points, ideas related to passages from books, in some cases those related to the reading task (Sri Lanka) or in Malawi, to a text read in class.

The Literacy Scale and Level Descriptors (Writing)

The following levels and level descriptions were decided upon by teachers in Malawi. A similar set of descriptions for each level was decided upon by teachers in Sri Lanka. It is worth noting again that there were differences in what teachers emphasised as being important for each level depending on whether the assessments were in English or in the national languages.

Level 1
The writing is organised in words and phrases. There is no evidence of use of punctuation or consistent orientation in shaping letters.

Level 2
The writing communicates meaning in simple words and phrases. The is some awareness of the use of full stops. Letters have clear shapes and orientations.

Level 3
The writing communicates meaning in narrative or non-narrative forms. Mainly simple sentences are used. Ideas are in some sequence. There is a clear awareness of the use of full stops, capitals and some with-in sentence punctuation.

Level 4
The writing communicates meaning through the use of simple and complex sentences. There is an awareness of the reader. Ideas are expressed in a logical way. There is good use of both between sentence and within sentence punctuation. Letters are accurately formed and consistent in size.

Assessing Writing: Malawi

An example of a task to assess the writing of 10 year olds in Malawi is provided on the following page.

Their achievements are profiled below.

ENGLISH - JUNIOR PRIMARY
WRITING TASKS

NOTES TO THE TEACHER

These tasks are designed to assess children's capabilities as independent writers.

What to do

Task 1 Aural task: extending and adapting

Read the passage *The Hyena and the Hare* to the class.

Ask the children to make up their own ending to the story

Each child should write in his or her own words on the worksheet provided.

Task 2 Writing task: short story

Read the story *In the Hospital* to the children.

Provide the children with Pupil Sheet JP Writing 2.

Ask the children to look at the picture.

Have a short discussion about the picture and the dialogue you have read.

Ask the children to write their own version of the story based on the picture.

Task 3 Factual writing

Divide the class into groups of two or three.

Ask the children to collect information and complete the form on Pupil Sheet JP Writing 3.

You should suggest to the pupils how they can go about obtaining the information, but you should not give them the information yourself.

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Profiles of Achievement
Writing in English and Chichewa

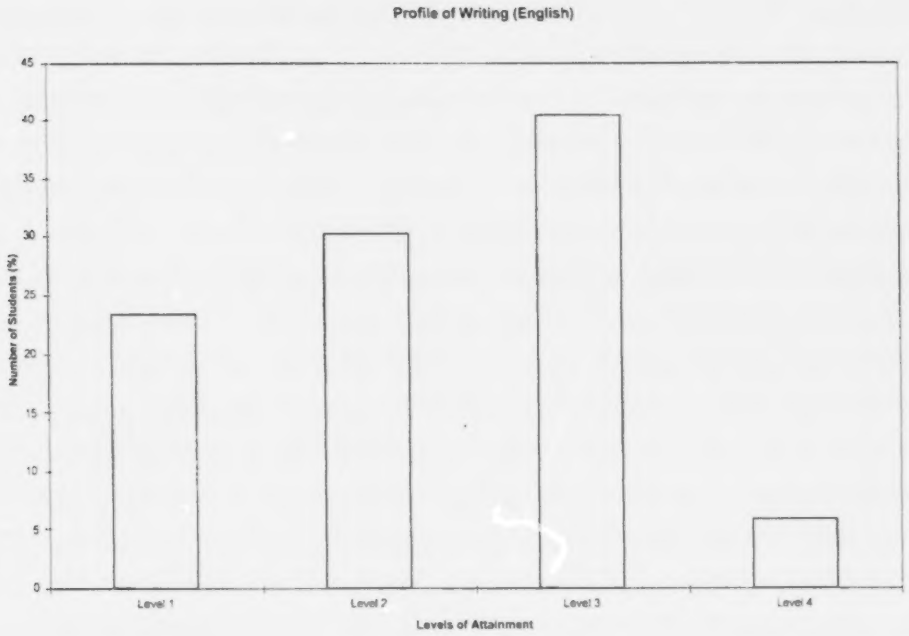

Figure 15 shows that for writing a story in English 23.3% of children achieved Level 1, 30.2% achieved Level 2, 40.5% achieved Level 3 and 6% achieved Level 4.

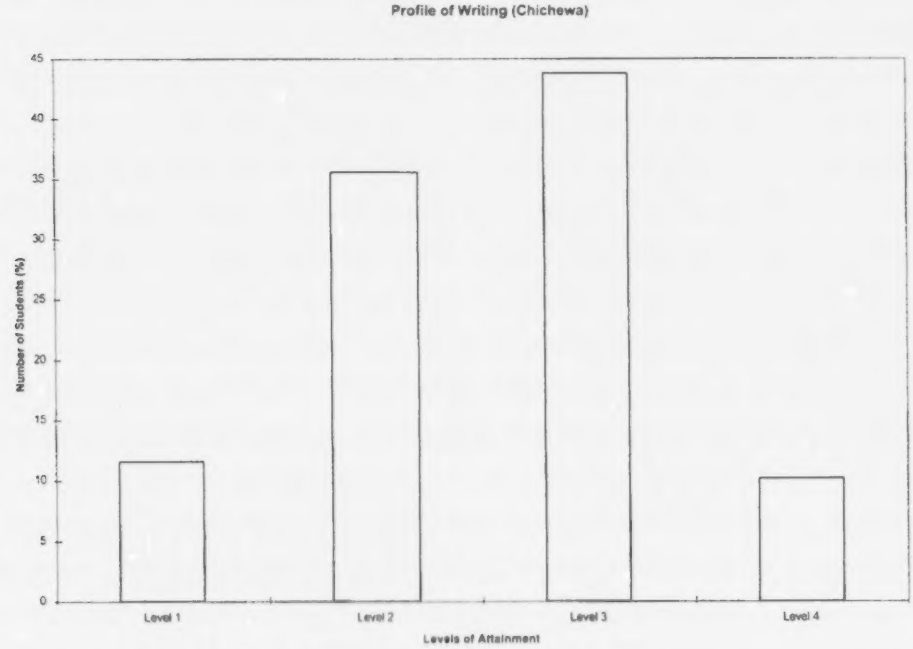

Figure 16 shows that for writing a story in Chichewa, 11.5% of children achieved Level 1, 35.5%, Level 2, 42.8%, Level 3, and 10.2% achieved Level 4.

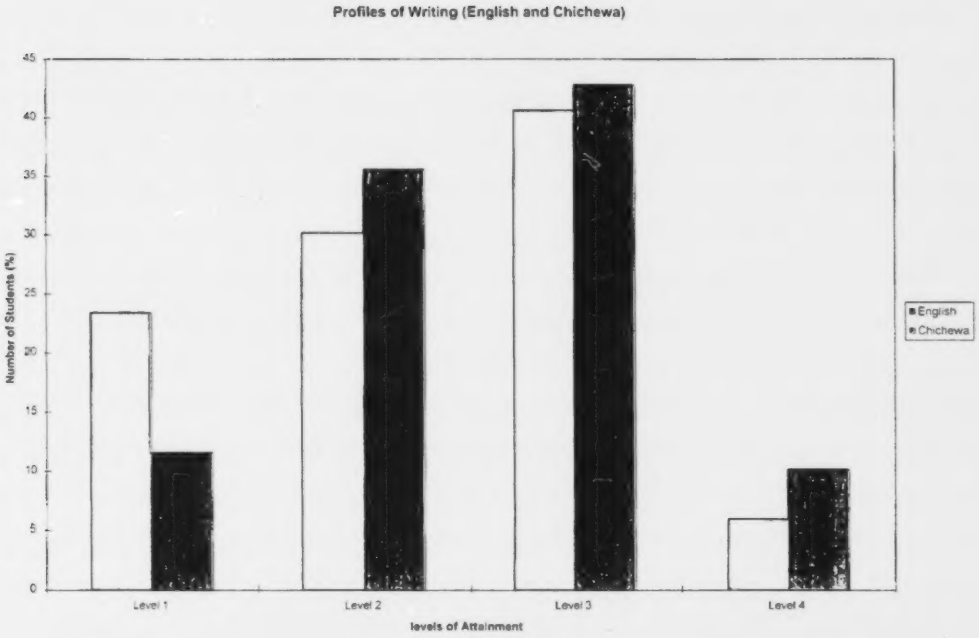

Figure 17 shows the profile of achievement for story writing in English and Chichewa.

ENGLISH
PUPIL SHEET JP WRITING 2

Child's name: .....
Class: .....
Date: .....

AT THE HOSPITAL

Dialogue **At the hospital**

Doctor	What's the girl's name?
Mrs Shumba	Wezi.
Doctor	What's her problem?
Mrs Shumba	Last night, she didn't sleep. She cried and cried. She had a headache and a stomachache.
Doctor	I see. How old is she?
Mrs Shumba	She's twelve.
Doctor	I think she's got malaria. Give her these tablets: Four tablets today, four tomorrow and two the day after tomorrow. She'll be all right.
Mrs Shumba	Thank you doctor. You said, four tablets today, four tomorrow and two the day after?
Doctor	Yes, that's right.

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AT THE HOSPITAL

ENGLISH - JUNIOR PRIMARY
WRITING TASKS
TASK 2 : SHORT STORY

NAME: Aliel Chikaonda
CLASS: STD 5
DATE: 24-09-1996

AT THE HOSPITAL

~~Now~~ I can see a girl who is sufering from malaria and I saw her a mother too. and I can see the doctor who is asking her when she started sufering. ~~when~~ but she said that she started sufering ~~two~~ years ago. now I saw the doctor who is giving her medicain. And I saw that, or I think that this girl has fifteen years old, and the doctor has thirty years old and her mother has twenty four years old. but when he ~~still~~ gave her the medicaine anything was airight. ~~and~~ And up to now she is still at right.

Assessing Writing: Sri Lanka

An example of a task to assess the writing of ten year olds in Sri Lanka is provided on the following page.

Their achievements are profiled below.

An example of the writing task - Sri Lanka

RESEARCH PROJECT ON ASSESSING THE QUALITY OF LEARNING AND TEACHING - 1996
(NATIONAL INSTITUTE OF EDUCATION - SRI LANKA & BRISTOL UNIVERSITY - UNITED KINGDOM)

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Profiles of Achievement
Writing in English, Tamil and Sinhala

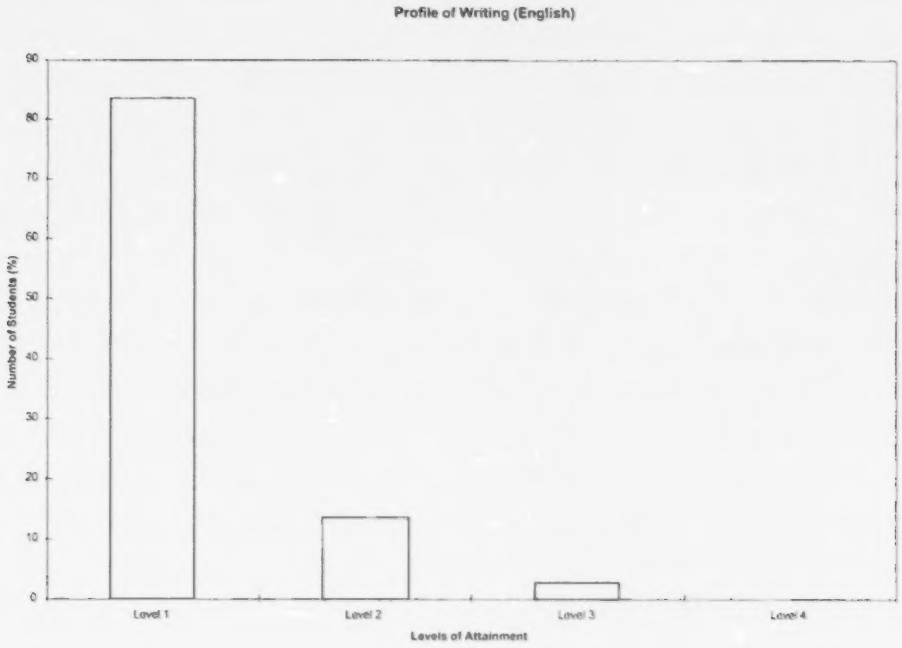

Figure 18 shows that for story writing in English, 83.6% of the children in Sri Lanka achieved Level 1, 13.6%, Level 2 and 2.5% achieved Level 3. No students in the sample achieved Level 4.

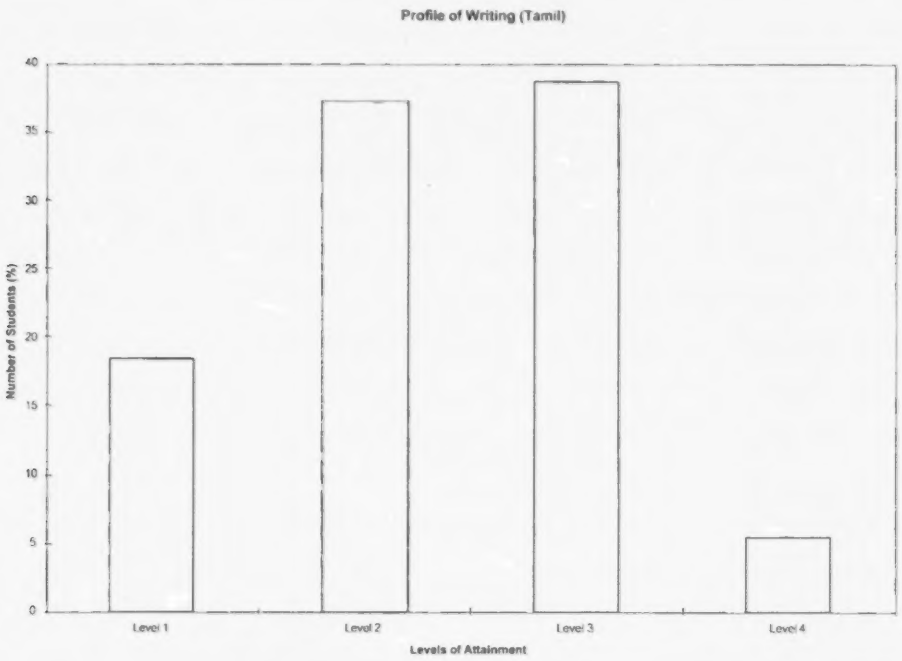

Figure 19 shows that for story writing in Tamil, 18.5% of students achieved Level 1. 37.3% achieved Level 2, 38.7% achieved level 3 and 5.5% Level 4.

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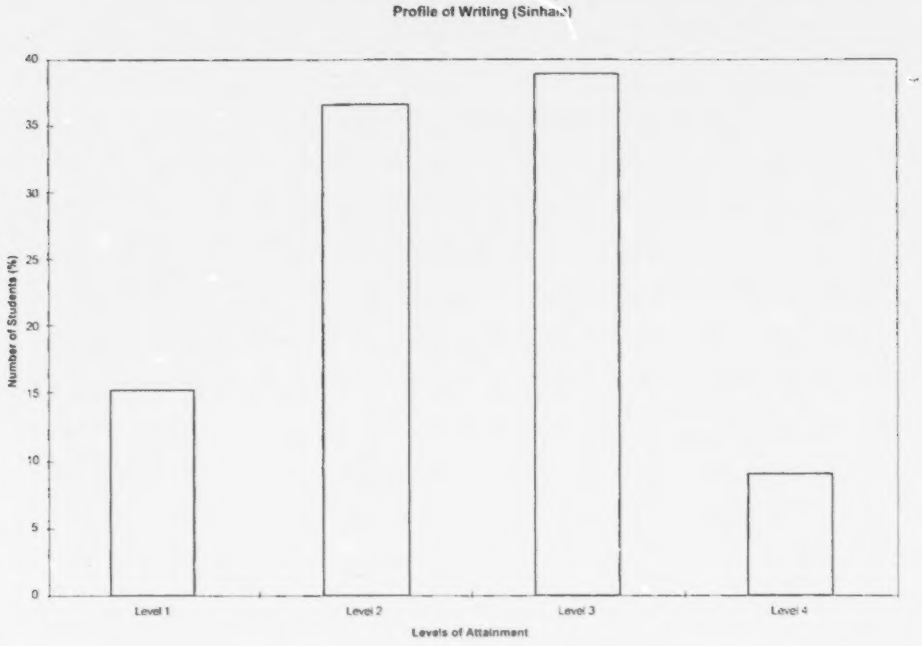

Figure 20 shows that for the writing of stories in Sinhala, 15.3% of children achieved Level 1, 36.7% Level 2, 39% Level 3 and 9% achieved Level 4.

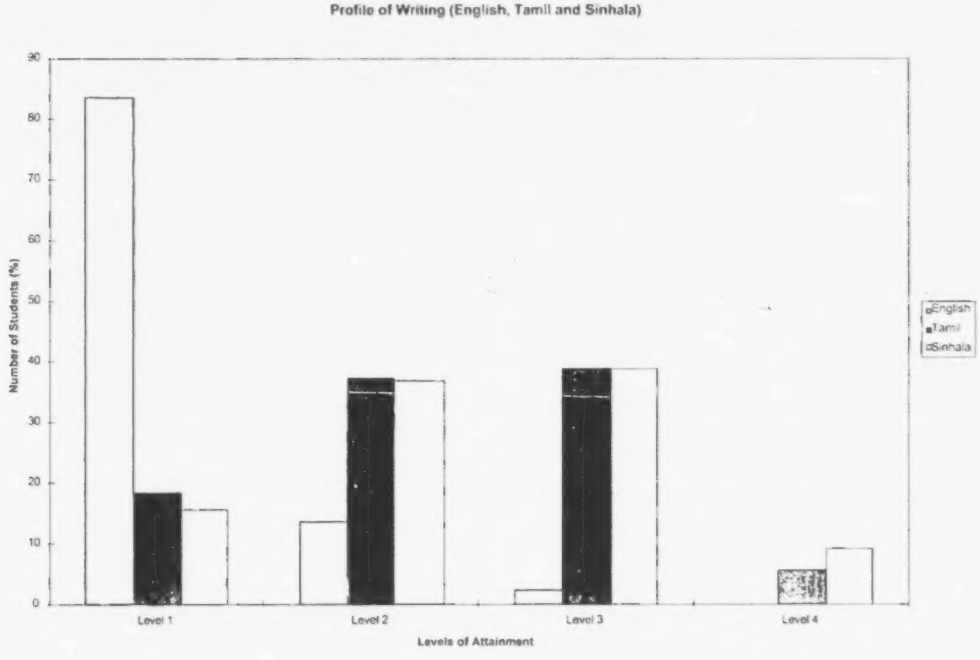

Figure 21 shows the profile of achievement for story writing in Sri Lanka.

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An example of the writing task - Sri Lanka

RESEARCH PROJECT ON ASSESSING THE QUALITY OF LEARNING AND TEACHING - 1996
(NATIONAL INSTITUTE OF EDUCATION - SRI LANKA & BRISTOL UNIVERSITY - UNITED KINGDOM)

ENGLISH
PUPIL SHEET (WRITING)

Child's Name: Sadiya Ranganath School: Ku/Pathuhera Model School.
Class: Year 4B
Date: 11.11.96

This a fruit stall. There are bananas in the fruit stall. There are grapes in the fruit stall. There are manges in the fruit stall. There are arapaws in the fruit stall. There are oranges in the fruit stall. Some fruit are in the basket. Mother is going to buy mangose. seller is wearing sarong. Mother has a bag. Mother is wearing saree. Mother has a beautiful face. Girl and boy are very heppy. Seller is an old man. seller is selling mangose.

with no guidence given.

Excellent. All the information is included All the sentences are correctly formed. Punchuation and verb grammar are accurate ~~Individuall~~ Individual words are seperated Letter formation is accurate

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Part 3 - Assessing Mathematics Learning

General Principles

Learning Mathematics was assessed in Malawi and Sri Lanka. In the case of Malawi, assessments were made in English while in Sri Lanka, the tasks were locally translated so that assessments were made in Sinhala and Tamil as appropriate.

In each case the assessment tasks emerged from the researcher working with local teachers and, in Sri Lanka, curriculum officers.

Tasks to assess Mathematics Learning

Two areas of the curriculum were selected, one for each of the two rounds of assessment. In the first round the focus was on number and operations on numbers. In the second, attention was given to measurement. Some tasks were designed to be undertaken by individual pupils who had to provide written answers. Other tasks invited pupils to work in small groups which produced written outcomes of their work both as a group and individually. Teachers were encouraged to observe the working of such group activities and to note particularly the nature of the communication which took place.

The tasks and instructions to teachers on how they should be administered are contained in the appendices. Examples and discussion of these follow.

The Sample

Teachers were asked to select all the students from their classes to participate in the research. About 300 students took part in the mathematics assessments (Junior Primary) in Malawi and about 150 students in the fourth primary class in Sri Lanka.

Awarding Levels

The use of Levels was attempted, to parallel that used in English. However the number of small items comprising the overall task made distinctions more difficult. A simple overall level grading was given following analysis based on the number of items pupils were successful in answering. Success in answering was not simply dependent on the final answer, but on evidence of working where this was appropriate.

The tasks in Mathematics

In each of the two rounds of testing there was an attempt to use both standard and less common type of test item on mathematical content in the mathematics syllabus at the relevant grade level. It was hoped that teachers would be encouraged to explore how their pupils responded to different types of question.

(i) Number

In the number items there were examples of

- questions given orally and others which were written,
- questions involving pure numbers and those where numbers arose in problem situations
- problems leading to a single answer and those involving some investigation with perhaps multiple answers.

Box II below gives an example of an activity for Infants in Malawi:

MATHEMATICS – INFANT
GROUP TASKS - NUMBER

NOTES TO THE TEACHER

This task is intended t encourage pupils to use their number skills to explore a simple money situation in small groups. We shall be interested in how they work together, what they find out, how they use their number skills and how they tell others about their findings.

What to do

Discuss this story with the pupils:

> Kodi has two coins ⊙ ⊙. What amounts can he make with these coins?
> [He finds that he could make 1t, 5t and 6t.]
>
> He draws pictures to show how he could do this:
>
> 1t ⊙
> 5t ⊙
> 6t ⊙ ⊙
>
> Two friends Mpango and Pezani have four coins ⊙ ⊙ ⊙ ⊙ . Work with some friends to see how many different amounts you can make. Draw pictures on the Pupil Worksheet to show the coins you would use to make each amount.
>
> Later we will share in the class what we have found.

Divide the class into small groups of three or four pupils. Each group can work on a shared Pupil Worksheet.

Observe how the pupils work together and he difficulties arise. After they have worked on this problem have a class discussion session in which groups report their findings. Encourage them to explain clearly and check that other pupils understand.

Collect the Pupil Worksheets.

Following the session, make some notes under the following headings:

- What happened in the groups during the group work sessions?
- What did the pupils find out?
- How well were they able to communicate their findings?
- How were their number skills used?
- What problems arose?

We shall discuss these experiences in our workshop at a later stage.

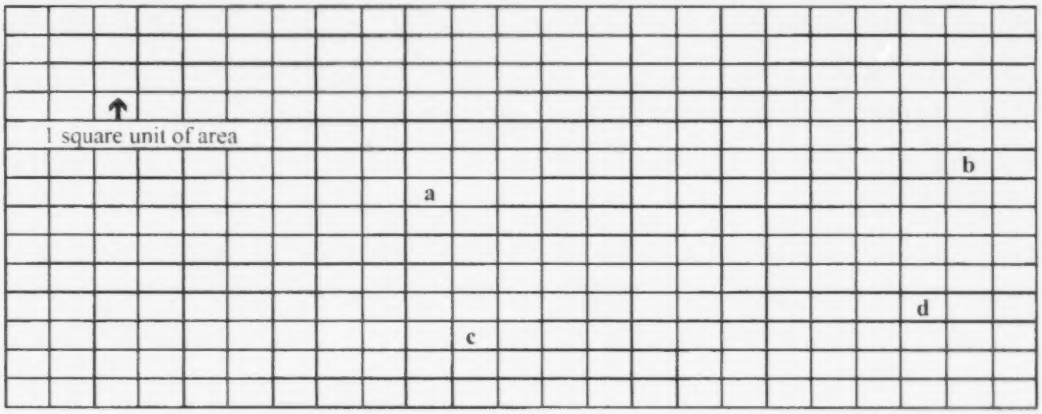
In the event with widespread participating teachers and schools, together with the only occasional contact between researchers and teachers, it became evident that the more subtle elements of feedback were being lost through problems of communication and the unfamiliarity teachers had in interpreting many of phenomena occurring in the learning of mathematics. A traditional expectation of items being right or wrong led to marking and summing of scores in spite of the analysis proposed. It proved too demanding to provide the security of the familiar, together with the challenge of that which was in form if not in mathematical content new to the mathematical experience of the teachers. Considerably more time would have been necessary with the teachers to support them in developing more usefully diagnostic testing with their pupils.

In general pupils in both countries showed themselves relatively competent at the straight computation, were more troubled at problems which required the selection of the appropriate operation and often required considerable support and guidance in those problems which were of a more open and non standard type. In the end the most useful outcome was the variety of items developed with the teachers,

giving evidence of ways in which the basic number skills can be applied in interesting and less closed situations.

(ii) Measurement

The selection of activities in this round of assessment was designed to provide data relating to skills and concepts but not the application of formulae which are often over emphasised in elementary work on measurement. Pupils had to find the length and area of shapes drawn on a grid but also to draw shapes according to given specifications.



They were also required to measure the size of a drawn rectangle and of the task sheet.

On dotty paper we can draw triangles using a dot at each corner.

Use the dotty paper below to draw as many different triangles as you can on a nine dot grid. (Draw one triangle on each grid.)

Write a few sentences about what you have found.

Finally there was a more investigatory task in drawing different triangles on a 3x3 grid. In the latter task teachers were again given guidance on some specific things to observe and several key questions

were raised with teachers. However the research mechanisms did not provide for the effective collection and analysis of this data. It remains to be followed up in a situation where researcher and teachers can work more closely together over an extended period.

The results from Sri Lankan schools in relation to measurement revealed some striking contrasts in the performance on particular items and sometimes between schools. Three examples may serve to illustrate:

(i) Students were given an example of a 'snake' drawn along the lines of a grid and shown how its 'length' could be found. They were then asked:

(a) to find the length of a given snake and then (b) to draw snakes of the lengths indicated. In most schools the success rate on these two types of item was not very different but at two schools there was a striking difference – nearly 100% success rate for the first item, only about 30% for the second type which required the inverse approach. Reasons for this difference would be worth closer examination but might suggest a very limited range of experience with length.

(ii) Two striking outcomes emerged from the items which required actual measurement:

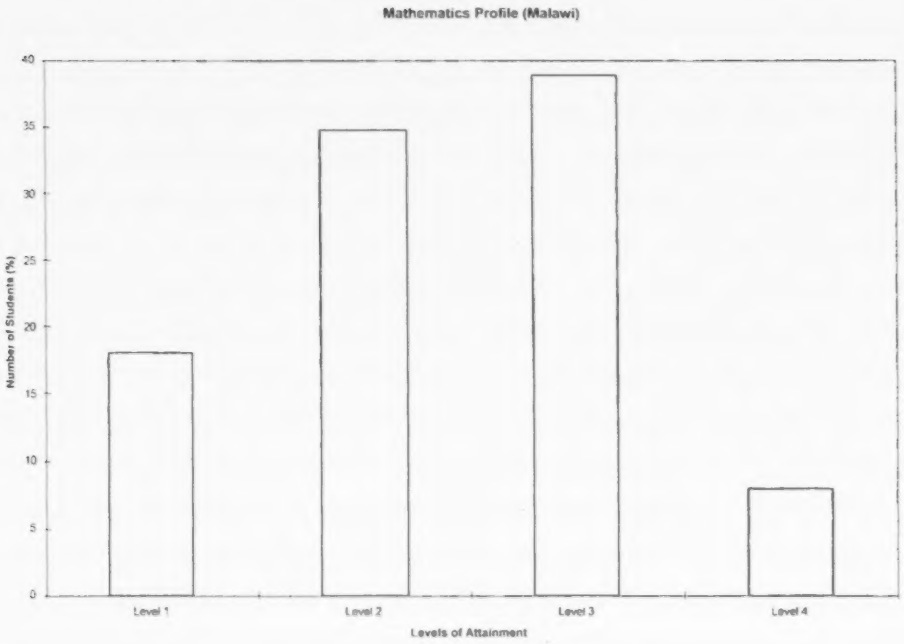
(a) in some schools, the level of performance on this skill was very low. This could simply reflect the timing of the assessment in relation to delivery of part of the curriculum or the availability of measuring instruments in some schools. Alternatively, it could arise from a very theoretical treatment of measurement in which experience working with the units and tools of measurement were not regarded as important

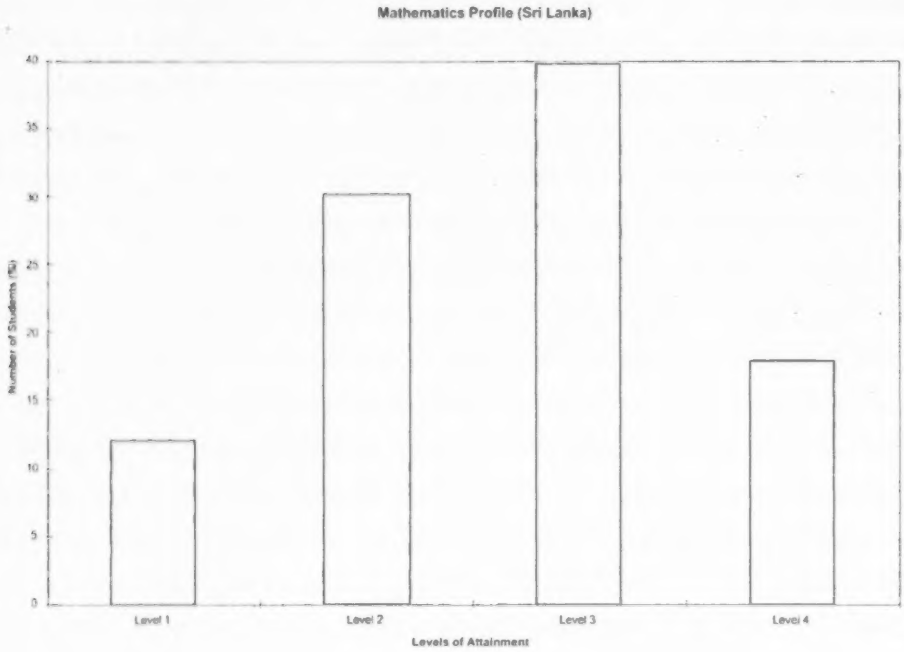
(b) in a number of schools, including some of those with the strongest results in general, there was a marked difference between the success in measuring length of lines across the page when compared with those up the page. In some cases the success rate was only half for the 'vertical' lines. Results for the smaller and larger rectangles to be measured were not very different.

(iii) In both the finding of areas and the drawing of shapes with given areas, pupils' success rate dropped rapidly when the shapes were not rectangular. In attempting to find the area of a drawn right angle triangle, the majority apparently adopted a counting squares approach but this seldom led to the correct answer. There was little evidence of a holistic view with the triangle being seen as half the related rectangle. As a consequence only 25% were successful on this item compared with the success rate of about 50% or better on all the other items.

The measurement tasks therefore reveal some interesting aspects of performance which would be worth further exploration. The strongest impression is that pupil performance is highly developed over a limited range of skills but significant difficulties are revealed (especially in some institutions) when problems are even modestly less orthodox. This may reflect teachers perceptions of what is expected of them in general, or in particular examinations. However, if the mathematics being learned is to be useful to the pupils in the long term current practice could well benefit from review.

Profiles of Achievement
Mathematics





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Chapter 6 - Discussion

In this chapter we will discuss the following aspects of the research.

1. Interpreting the profiles
2. The reliability and validity of the levels of assessment

The Oracy Profiles

Figures 1 and 2 in Chapter 5 show that in Malawi, for English and Chichewa 27% of children and 40.7% of children respectively achieved level 3. In terms of the arbitrary norms set by teachers children could be seen to be under-performing in this learning area. It is encouraging, however, that 38.8% of children are achieving at least a level 2 in English and if the profile takes the attainment of both level 2 and level 3 into account then the overall level of achievement in this domain of literacy is promising.

The verbatim records kept by teachers of children's oral language shows that children have a reasonable to good vocabulary in English in this age group. It would appear that the difficulty lies in constructing sentences or extended discourse in English. Children at all levels appear to lapse readily into Chichewa to convey meaning. A sustained discourse in English without inserting phrases and sentences in Chichewa to clarify meaning is rarely achieved.

In Sri Lanka the oral competencies of children in English is similarly below the norms set by teachers. Figure 6 in Chapter 6 reveals that only 20.3 % of children achieved level 3. It is however, worth noting that 42.5% of children achieved level 2 illustrating that in this country like in Malawi oral competencies reside more in the knowledge the children have of English words rather than in their ability to sustain a discussion. The oral samples collected by teachers illustrate a reasonable vocabulary but there is a definite weakness in children's capacity to build up a discussion on the basis of what they see in an illustration and to go beyond the illustration to use more imaginative language.

The Reading Profiles

The assessment of reading in both countries revealed interesting similarities. On the whole children were reasonable to good readers in both Malawi and Sri Lanka if one went by their accuracy scores contained in the running records maintained by teachers. The Profiles of Achievement for reading in English and in Chichewa in Malawi shows that 32.4% of children achieved level 3 in English and 39.2% in Chichewa. It is also worth noting that 37.6% of children achieved level 2 in reading in English and 17% achieved a level 4. The reading records maintained by teachers showed that children understood what they read and were able to comment on the text. Those children who achieved levels 3 and 4 very often demonstrated (much to the surprise of their teachers), capacities to provide interesting endings to passages in reading tasks which stopped short of providing an ending or could give alternative outcomes to stories when asked to do so.

The reading tasks revealed for teachers that students enjoyed reading and had a positive attitude towards the activity. In Sri Lanka the reading tasks were conducted in interesting and varied ways. Most tasks were constructed in a role play fashion in which children had to engage in dialogue. Readers took on the roles of mother, uncle and Rani and showed an acute awareness of how language functions in social and cultural contexts such as talking to fruit sellers at the fair.

The Profiles of Reading in English, Tamil and Sinhala show that teacher norms based on the expectation that at least 50% of children would achieve level 3 in each case were not borne out. In English the majority of children achieved level 2 (44.2%) while only 30% achieved level 3. In Tamil and Sinhala the majority of children achieved level 3 (37.2% and 43% respectively) and a slightly smaller number achieved level 2. It is worth noting here that in Tamil 25.8% of children achieved level 4.

The Writing Profiles

The Profiles of Achievement for writing in English and Chichewa in Malawi are interesting. 40.5% of children achieved level 3 for writing stories in English and 42.8% achieved level 3 for story writing in Chichewa. The quality of written work, both story writing and descriptive writing in Malawi is high.

The samples of writing maintained as evidence by the teachers revealed that children were capable of using language imaginatively and meaningfully. This appears to be in contrast to children's use of language in the domain of speaking. It is perhaps worth reflecting here that the assessment of oracy is not a standard feature in Malawi and the unfamiliarity of the task is likely to have an effect on the outcome.

In Sri Lanka the Profile for writing in English was unsurprising. Over 300 samples of writing were analysed. Most children, 83.6% of the sample achieved level 1; 13.6% achieved level 2 and only 2.5% achieved level 3.

As noted in above, English is introduced to children in Sri Lanka in year 3. The pattern of teaching English to children in the first instance is to develop their communicative competence in the area of speaking and reading. Writing receives less attention in the form of the production of extended text. What the writing samples reveal is that children are competent in naming things and spelling words correctly and indeed in many cases they are capable of producing simple sentences correctly. However, the use of conjunctions and other devices to link sentences has not been widely established at this level.

It is clear from the results therefore that the expectations of teachers of the levels children could attain were too high.

The Maths Profiles

The assessment of pupils' work on the mathematics tasks was carried out using an item analysis which revealed correct answers, mistakes and pupil responses to the open questions.

In general, pupils showed a high level of success in the straightforward knowledge and computational problems using the four 'rules'.

Word problems presented greater difficulty but it was often difficult to distinguish between difficulties caused by the language (English) as such or the need in word problems to use less algorithmic approaches i.e. needing to decide on appropriate strategies and operations to achieve a solution.

Teachers regarded language as the primary cause of difficulty but evidence from countries where English is a first language suggests that the other cause is frequently a problem where mathematical activity has become routinised through a narrowly conceived algorithmic approach.

How reliable and valid were the tasks as a way of collecting data on children's achievements?

Mathematics Tasks

In Malawi, the infant tasks were prepared in English and it was necessary for teachers to translate the instructions and the word problems into the vernacular although words for numbers have been learned in English. The group task appeared to present organisational problems with such young pupils in large groups.

Teachers , however, indicated that the tasks were appropriate for the pupils at each level.

More open questions which had no unique answer presented problems for the teachers in making an assessment. For example, Senior primary pupils were asked to 'write down a number which is smaller than 10, but which is as close to 10 as you can make it'. Teachers were asked to 'mark' some pupil scripts before the teacher meetings but not to add marks to achieve an overall 'score'. However most did add up the number of right answers, presumably through force of habit. Knowing whether each answer is right or wrong becomes important in such a process if one is to achieve a total. Experience of what can be learned from the variety of pupil responses and how they might be used as a starting point for further teaching is necessary if the potential of such questions is to be realised.

While most of the time in teacher meetings was spent analysing and discussing pupils' work on the tasks, teachers' ways of thinking became apparent. Significant amongst these were

- personal uncertainties about possible answers to some of the more open questions; as was to be expected the range of competence and confidence in mathematics varied considerably within each group.

- 'bounded' thinking and setting of expectations in relation to mathematical knowledge e.g. 'children in Standard x do not know about numbers greater than y because it is not on the syllabus'. The continuity and underlying patterns in much of mathematics are easily lost, as is the desirable opportunity for pupils to extend into areas with which they are unfamiliar through appropriate problems and challenges.

- strongly held beliefs as to why children make certain mistakes and what is needed to rectify them. The latter were usually expressed in the form 'they need more practice at this type of question'. Beliefs appear frequently to centre on 'practice making perfect'; an awareness of the significance of conceptual understanding was seldom evident.

In Sri Lanka, teachers reported that children had been very eager and highly motivated by the activities. In some cases children had turned up for class, although there were habitual absentees. Teachers said they also found the tasks extremely revealing and were enthusiastic about their potential.

Regarding the group work task, it was felt that this did not motivate the less able although sometimes the mixture of strong and weak pupils in the group prompted the latter with the right answer but without understanding, and sometimes the answer was copied. It was felt it would be better if the task were done individually. Some teachers had tried competition between groups with success. In the chain question the instructions in the example are not clear.

The first and second tasks were felt to be easy, but the third, which needed multiplication and addition was found to be difficult. However, overall the children enjoyed the tasks done in a small group.

In Tamil a good deal of time was spent discovering which words children had found difficult or easy to read in terms of the number of letters. It was found that words with 5 or 6 letters caused difficulty and this needed to be addressed by introducing more longer words into the curriculum. Teachers in all the groups were invited to identify individually and collectively examples of good, average, poor and , in some cases, very poor, work as basis for building up descriptions of pupils' achievements in terms of agreed criteria of competence.

Language Tasks

The language assessment tasks were divided into four areas - reading, writing, listening and speaking, although in Year 4 only listening and speaking are in the curriculum. The tasks used did not include an assessment of listening.

Reading

In Sri Lanka children were given tasks for reading and writing, although these are not in the text books. The tasks revealed a surprising amount of knowledge which had not been formally taught. In reading, there were three different tasks. In the first one 'Let's go to the fair', students appeared to be motivated by the presentation of a real conversation and the role play approach. Even the weaker ones who habitually do not seek to answer questions or become involved wanted to show what they could do. Many of the children were concerned about the marking which took place in front of them, given their unfamiliarity with this kind of assessment. Some had to be reassured that it was not a test. Having understood the nature of the task, the children both enjoyed it and were able to correct themselves. It was felt that this task is easier to read than conventional reading exercises in the text book and encouraged the children to use appropriate text patterns. The teachers found various ways of implementing the instructions given with the task. One teacher for example gave all the other children in the class a different task to do whilst concentrating on the three involved in the dialogue. Another teacher repeated the task using different children as a drama. In the event of the course, the subsequent participants would have had the benefit of hearing earlier attempts. However, the teachers felt there were no real practical problem to using the tasks. For task 2 which is longer, the children apparently found it more difficult, and more words were mispronounced such as 'stall' and 'too'. Some children did not pause in the appropriate place or were not sure if it was a question.

In Task 3 there were a number of specific mistakes. 'For' was read a 'off', 'toys' was pronounced 'tows', 'has' was read as 'how', 'the' and 'them' were new words to the children and they needed help with them, and 'guess' was pronounced 'goss' and was also too difficult. It was apparent that schools which have a limited English language use, for example Sinhala-medium only using the text book for English, found much more difficulty than schools where extra reading material and stimulus material

generally is supplied with more emphasis on English-medium context. The teachers were very clear that from a curriculum point of view there was strong evidence of the desirability of exposing children to as much English as possible in all different forms, with as much variety and interest built in. They were impressed with how much the children could do, that they would not have expected.

Speaking

The children's ability to speak fluently was affected by the degree to which they were concerned about doing the task correctly. This caused some to hesitate, although they were potentially competent. Familiarity with the role play built in to the text book helped overcome this problem. The tasks had been correctly set up with the setting the scene methodology used in the text book. The children were able to produce sentences. Setting was important to the child's subsequent success. The quality of the children's work varied in terms of its creativity, its accuracy, its complexity, its fluency, variety of structure, the enjoyment shown by the children, how meaningful it was and the vocabulary used. Specific problems were identified such as difficulties in using the word 'the'. An example of the benefit of this kind of assessment occurred in one classroom where a teacher gave a child a task to do. The teacher said he would not be able to do it, but he was successful, thereby showing the benefit of systematic assessment of this kind.

Writing

It was found that the children tended to write the sentences that they had already spoken. The standard achieved in writing was regarded as less good than that achieved in the other areas and the teachers felt that the curriculum should give more time to it. They identified a number of dimensions of quality including spelling, the use of paragraphs, words or phrases or sentences; the use of new vocabulary not in the text book, grammatical accuracy, a variety of tenses, the use of linguistic pictures not in the text book, punctuation and capital letters.

How reliable and valid were the Levels of Achievement?

The question about the reliability and validity of the Levels of Achievement is an important consideration for profiling systems. There are a number of methods of constructing a profiling system, some which make stronger claims than others to reliability and validity indices. The KEEP profiling system in Australia for example does not claim to provide numerical indices of reliability or validity and argues that the intention of the system is to profile performance-based assessments in a non psychometric fashion. The Victoria English Profiles on the other hand make claim to strong reliability and validity indices. Teachers are required to rate student's achievements with reference to indicators specific for each of nine bands. A score of 3 is obtained if all behaviours associated with a band are consistently displayed by a student. A 2 is achieved if most of the behaviours are present. A 1 is achieved if some of the behaviours are developing and a 0 if none of the behaviours have yet been observed. This scoring system is then subjected to Guttman reliability estimates (see Rowe and Hill, 1996:328) as well as test/re-test reliability's and inter-rater reliability (see Rowe and Hill, 1996: 329). The main source of evidence for the reliability and validity of the reading profile is drawn from the Victorian 100 schools study (Griffin and Rowe, 1988) in which the profile was completed for 5,000 pupils.

Like the KEEP system, the profiling framework used in this study does not make strong claims for reliability. The levels were determined by through teachers' professional knowledge and their analysis of samples of pupils work. High inter rater reliability coefficients were obtained.

Were teachers able to maintain records of achievement for individual children?

The study found that most of the teachers involved in the study were able to maintain a record of achievement for the children they chose to assess. (It is worth noting here that not all children in the class were assessed. We shall return to this point later).

The research established that, on the whole, all teachers involved in the study were able to apply the profiling framework in one form or another, in collecting evidence of children's achievement in literacy. Teachers agreed that the descriptions of the levels of achievement provided them with a meta-language by which to describe (to children, colleagues and parents) what children were achieving. Teachers also submitted that the profiling system gave them a way of assessing domains of literacy which were previously either not assessed or assessed in a fairly basic fashion. Teachers agreed that the application

of the framework sensitised them to children's learning in a way that was not possible before. This augurs well for the diagnostic purposes of assessment, embodied in profiling systems.

Could teacher's collect evidence?

The collection of evidence proved to be a new and often 'daunting' task for teachers. Most of the teachers in Malawi had no history of developing portfolio's of children's work and the collection of evidence was particularly challenging. Resource limitations proved to be an influence upon the amount and range of evidence of achievement which could have been accumulated. The tasks were all accompanied by teacher record sheets and pupil work sheets. This allowed teachers to collect samples of children's work as evidence of their achievements. Beyond the tasks however, the collection of additional information about children's performance was limited.

Annotating evidence of children's work produced interesting differences between teachers. Teacher's in both countries had little prior experience of commenting in detail on pupils work. In both countries, the deficit model of learning (right or wrong answers) was strongly held by teachers and a model which encouraged them to comment not on the answers but on what children might be doing and the learning processes they were experiencing was quite challenging. Teachers in both countries however rose remarkably to this challenge and provided substantive annotations of children's work. These annotations and comments is evidence that teachers are gaining more of an understanding of the 'how' of learning.

Even those comments and annotations on student's work, which provided less of an insight into the learning processes on a particular aspect of work, could be interpreted as giving insights into the broader context in which education takes place. Take the following comments by a teacher in Malawi who is looking at the relative performance of two students on a mathematics tasks:

> 'The performance of this child in mathematics is average because wherever he has been given work to do he tries as much as possible to get it right. At times he manages to do so but at times with difficulties, for example when an example has been given the teacher must repeat it several times before he understands what is expected to do. A number of skills and methods must be used in order for him to grab a thing. For example, if the teacher is to explain about a triangle using bottle tops he/she has to demonstrate, then do practice together with the pupil, then ask him to do by himself. In so doing is able to do it correctly.
>
> The problem in understanding is not because the pupil is not intelligent but because he lacks continuous practice at home as well as at school, because of the swollen numbers of pupils in one class. Given a chance to learn in a class where the number of pupils is reasonable and the teacher is able to do individual help probably he can do better than at present'.

Of the second child, the teacher has this to say

> According to the performance of this pupil, it shows that the girl is able to do a good number of activities with little supervision. For example once she has been given an example in Mathematics, she is able to do the rest on her own. After thorough investigations it was discovered that she is able to grab things fast because before her primary education she had attended nursery school. She has got sisters who are in private schools where English is fluently spoken. Her family is well to do. According to reliable sources her parents once worked outside this country where probably life is a bit advanced...'.

It is clear that the comments have little to do with 'uncovering' the learning processes associated with the tasks themselves. Rather, they are comments of a broad nature which draw on the teacher's meta theory of the factors associated with educational success.

Whether the theory is right or wrong is not the concern. Rather, they show that teachers think about the factors which influence learning as well as the processes of learning. It is also true to say that these are always inter-related.

How manageable was the system?

Another question addressed by the study is to do with the manageability of task administration as a method of gathering evidence of children's achievements. According to Sheil and Forde (1995) the manageability of a profiling system is vital to its success. They argue that administration of tasks, documentation and reporting procedures are time consuming and when demands on teachers become excessive, the profiling system may be regarded as unmanageable.

The study found that administering the learning tasks were demanding of teachers time. Teachers found that using the tasks as assessment tools per se was not necessarily new to them, but the practice of making notes or recording their findings, constituted a cultural shift.

The physical size of the classrooms in the schools involved in the study was also a factor. None of the teachers involved in the study were able to use the tasks with all the children in their classes. Rather, teachers in all schools selected children in their classes (normally between six to ten pupils in a class) for inclusion in the study.

Sampling within a class does not necessarily invalidate the results of a study. It is perfectly reasonable to argue that a stratified random sample which is based on teachers' intuitive judgements of 'weak', 'average' and 'good' learners is a useful way to obtain a sample within a class. Monitoring the achievements of these learners over time would provide a legitimate basis for generalising about the relative performances of larger classes as a whole.

Chapter 7 - Conclusions and Recommendations

The study confirmed that in primary schools in Malawi and Sri Lanka, children's literacy learning and learning of mathematics were not being recorded systematically. Although teacher's intuitive judgments of children's capabilities were often good, it did not allow them to diagnose specific areas in which children were not achieving. Further, it was found that teachers did not have a 'meta-language' through which to communicate children's achievements to parents or the educational authorities.

The study set out to address a number of important questions. First, it was designed to consider whether a profiling system capable of providing reliable and valid indicators of children's learning could be developed in two countries, Malawi and Sri Lanka. Second, it was concerned to establish how far the capabilities of teachers to collect information about children as learners, evidence of their learning and to record the achievements of children, could be enhanced.

1. *The findings show that teachers in Malawi and Sri Lanka were able, through a process of negotiation and development to establish profiling systems for primary education in which the achievements of children in literacy and mathematics could be charted.*

The processes associated with developing the profiling systems, particularly the frequent meetings of teachers in each country, produced a number of important benefits which are worth highlighting here:

- Teachers were given the space to reflect upon their current professional practices and attitudes to identify those areas in the curriculum they wanted to change.

- During the process teachers dealt with theories of child development and literacy acquisition accepting some and rejecting others and in the process they developed their own theories about the education of young children.

- Teachers were highly motivated during the research process and they reported that developing and refining the profiling system was very satisfying. For many, they felt themselves to be part of a collaborative effort for learning about and improving primary education.

- Teachers were understandably dismayed when students levels of achievement failed to reach the desired norms that they had established. That 50% of children failed to achieve a level 3 in every aspect of literacy and mathematics assessed was however accepted by teachers and they understood that the profiling system gave them a base line for where children were at and what needed to be done in order to raise the children's levels of achievement. Teachers recognized that using a profiling system made it possible to demonstrate the many different ways children can work towards mutually agreed standards of competence.

2. *Teachers involved in the study were able to collect information about children as learners, collect evidence of learning and to record the achievements of children.*

- Teachers reported that they had few problems in using the assessment tasks to collect information of children's learning. Some tasks, as discussed in chapter 5, were not as well suited to the context of education as others and teachers found them more difficult to administer. But on the whole, all tasks were administered and were largely successful in eliciting from students the learning processes the researchers were interested in studying.

- Teachers reported that collecting information of children's learning through the assessment tasks provided taught them a tremendous amount about what children knew and how they learnt.

- Teachers were also able to collect samples of children's work and to produce test-like records such as running records, and observational notes which provided the actual evidence of children's progress. This was a new and challenging activity for many teachers involved in the study and was only possible because dedicated record sheets were provided with every task.

- The real challenge for teacher-based assessment procedures lie in the collection of evidence of children's work produced over the period of a school term or school year. In the case of Malawi, and perhaps less so in Sri Lanka, the level of resources available in schools would make this an impossible prospect. However, the study does demonstrate that the collection of evidence is

possible even in poorly resourced educational contexts, when record sheets and clear guidelines on what constitutes evidence are provided.

- Teachers demonstrated that they were able to comment on and interpret children's work samples to reach decisions about what they had achieved.

3. A main question arising out of the research is the credibility of and potential use of the profiling system beyond individual classrooms. The issue here is the tension between the need to provide data for teachers, students and parents on the one hand and the needs of educational authorities for data reduction and for comparisons of schools. The question then was how could the rich qualitative evidence based on teacher records that had been generated be summarized to meet the needs of the educational system for indicators of 'quality' without trivializing or distorting the data or diminishing its value for making classroom decisions? Could the data be used effectively for these two quite distinct purposes.

Certainly part of the answer would appear to lie in being able to assign scores or levels to the profiling system that can easily be interpreted at both a local, as well as a national level. The goal therefore was to provide a robust enough 'language' to describe the broad picture of students' achievement at a given stage of schooling (Little and Wolf, 1997, Broadfoot and Gipps, 1997, Dougherty, 1998) for the English National Assessment system was designed explicitly to fulfil 'diagnostic', 'formative', 'summative' and 'evaluative' (ie system-wide) assessment purposes. However, it is doubtful whether these goals have all been achieved.

The four point scale was developed in keeping with other international examples of profiling systems. However, the research showed that the level descriptors describing each level may need review and revision in both countries as teachers become more familiar with a wider range of pupils' work. In many other international examples where teachers have been involved in developing similar profiling systems, the development phases were not necessarily longer but more intensive . The levels of achievement in Malawi and Sri Lanka were adopted after only two drafts, but other examples show that it is often after 4 or 5 drafts that teachers find their anchors and are capable of writing descriptions of each level which are clear enough to be used comparably by teachers throughout the system.

To address the issue of the reliability of teacher ratings, the study provided for the samples of student work to be brought to the meetings by teachers, these were exchanged and blind read by their colleagues who then assigned a second score. Inter-rater reliability calculated on these scores were consistently high. Thus the finding suggests that the kind of methodology adopted in this project to generate both pedagogically useful and policy relevant data concerning the quality of learning and teaching has considerable potential.

Moreover, in addition to the high inter-rater reliability coefficients the moderation process itself is an important one. Teachers were asked to review samples of work achieved by students who were unfamiliar to them, to discuss their interpretations with colleagues an to arrive at a common understanding of the relative 'value' of the work. All these processes have been shown to contribute to the professional development of teachers (eg Haslen, 1994).

Recommendations

1. It is proposed that the research be adopted as a model for establishing profiling systems for the assessment of learning in developing countries. Shorter, more intensive cycles of work would be preferable.

2. The task development process in the research was time consuming and not always suited to teachers working on their own. It is recommended that nationally produced standardized tasks be developed with the assistance of curriculum developer in each country.

3. The administration of tasks proved to give teachers little difficulty. Nationally produced tasks could be administered by teachers in selected schools 3 times a year.

4. Large class sizes prevented the administration of tasks to whole classes in areas of assessing reading, oracy and in certain mathematics tasks. Sampling within classes for the administration of these tasks has proven to be a useful strategy. In such cases information on the learning of every individual child is not always possible but information gained of a random sample of children is a useful monitoring device.

5. The processes of gathering, recording and reporting such 'quality' information should be explicitly 'low stakes' and not used publicly in the form of league tables to compare schools, regions or countries. If this happens the formative potential for encouraging better teaching and learning is likely to be forfeit to more mechanistic approaches to 'getting the scores up'.

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